QUALITY ASSURANCE SCHEMES

TRACEABILITY DATA:
a gold mine at our disposal

Traceability data is a valuable source of information about farmers' actual practices.

The information gathered to satisfy traceability requirements is currently underused. And yet it contains a wealth of diverse information.

The paper trail and records kept by farmers are what is called "traceability". It came about after food scares as well as from growing societal pressure for greater communication, transparency and guarantees regarding practices, but also from European and national regulatory requirements.

There is also an industry-related type of traceability, linked to demands from the food industry, or to the introduction of quality assurance schemes.

Quality schemes involve recording crop operations, and sometimes also on-farm storage operations, in order to ensure that practices comply with the scheme's specifications: this equates to around 50 pieces of data per parcel!

Research and industry are looking for data

Apart from the benefits of entering into a quality assurance scheme (see ZOOM), traceability data is a valuable source of information about farmers' actual practices. Its value does not have to be limited to rubberstamping paperwork to show compliance with regulatory and commercial traceability. It can, for example be used for agronomic purposes, to be fed back to farmers through technical advice.

Studies carried out by agricultural research and development actors in France are still often based on statistical or modelling data, or data extrapolated from some experts' advice. In order to acquire information on farmers' actual practices, observation networks need to be developed, such as the cropping system monitoring platform which is being created as part of the Syppre [(1)] project. Access to this traceability data is a valuable tool for the research community.

Some manufacturers are also looking for information about farmers' practices, either for internal use or to feed into targeted communication to consumers. This data is sometimes used for indicator calculation.

« 274,000 agricultural operations have been transferred to the SYSTERRE® tool without having to re-enter them, thanks to the interoperability of this system. »

The resulting information feedback needs to be structured

One of the obstacles to fully utilising traceability data is that the recorded and stored information needs to be organised and structured. For example, information on cropping techniques are often recorded and stored by various means: on paper (crop records, field data sheet, production contracts) or in digital form (field management tool, traceability software from storage organisations, etc.). So, when farmers wish to utilise their data to monitor and analyse their practices, or to assess them through indicator calculations, field data must somehow be fed back to a tool that is capable of such calculations. But those different recording methods are not all interoperable.

Some field management tools include the calculation of indicators such as margins, expenditure, production costs, and even the treatment frequency index (TFI) and overall nitrogen balance. This way, the end-user can get primary information feedback. To go further, the field management tools must be capable of data exchange with more advanced indicator calculation tools that help to analyse data and provide more in-depth technical and economic support.

The value of the data provided by field management tools will be enhanced if those tools are interoperable and capable of exporting their data in a standardised format.

Value enhancement is possible

This challenge is not unsurmountable, as the SYSTERRE® tool, designed by Arvalis, has shown. It quickly collects the information describing the farmer's practices, and calculates a group of technical, economic and environmental performance indicators. A data importing module using the Daplos format (standardised field data exchange format) saves having to input information which has already been recorded in field management tools capable of exporting them in this format. Since its launch in 2013, this module has helped to transfer data from over 31,000 parcels, which represents over 274,000 crop operations.

As a result, the value of data recorded since 2010 for the purpose of complying with a quality scheme (2), has been enhanced through the SYSTERRE® tool. Sixteen grain operators are taking part in it, involving the data from 1829 harvested parcels in 2016, and 16,700 hectares. It calculates several indicators, including overall nitrogen balance, total nitrogen rate, mineral nitrogen input split, treatment frequency index, greenhouse gas emissions, yield, protein content, raw energy production and nutritional value.

(1) See article "Réseaux d'agriculteurs Syppre: accompagner la transition en ferme ", Perspectives Agricoles N° 38, November 2016.

(2) See article "Chartes de production Arvalis/IRTAC : une norme française pour plus de visibilité ", Perspectives Agricoles N° 433, May 2016.

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