

# SHOULD DATA SHARING be encouraged in agriculture?



The fact that an increasing amount of data is computerised and is acquired automatically, raises questions regarding its use and potential risks in disseminating it. In this context, Bruno Lauga, database manager at Arvalis, describes the challenges arising from collecting data from farms.

## **Perspectives Agricoles: Are there real advantages in sharing data?**

**Bruno Lauga:** Like in other sectors, data collection and processing is very useful in agriculture, as it helps to generate knowledge and create new services. The data is often used in a different specific way for each application. More open data sharing within a farming business, and with technical organisations and service providers, would help, for example, to improve the efficiency of cultural operations as part of a precision farming approach. Feeding information into several decision support tools at the same time avoids having to enter data several times, and would deliver a better overall picture of a farm. For research organisations, new sources of information give greater chances of taking the diversity of agronomic situations into account.

We can also foresee being able to identify cropping practices that solve specific problems and the effects of which may not have been optimised yet.

## **P. A.: Which Is there not a risk of losing control over the information that has been given out?**

**B. L. :** It is important to make sure that there can be no negative impact on the person providing the data, to guarantee that it will be used for the intended purpose, and ensure confidentiality. The issue of governance over a farm's data, which comes under contractual relations, has, so far, not been clearly addressed by any legal, economic or ethical framework. Consequently, farmers are legitimately concerned about this, since they have no way of controlling the way in which their data is being used. This concern is shared by data suppliers who find it difficult to determine to what extent they can make this data available to others and allow them to reuse it. It is therefore essential to create conditions of use prioritising trust and transparency, taking into account the wishes of the farmers whose businesses are the source of the information collected.

## **P. A.: Are there already technical solutions available?**

**B. L. :** The Genetic Information System database is a representative example. It collects information on the performance of selective breeding herds as part of a multi-professional agreement under governmental supervision. The organisations wishing to access the data must ensure that the breeder agrees with whichever way this information might be utilised by the GIS. A "chain of trust" must be established, protecting data exchanges and enabling farmers to keep control over their data, while remaining anonymous. Other applications already exist, but they are rare and are all designed for very specific needs. One of the main stumbling blocks with this type of tool is businesses' reticence to facilitate the sharing of what is considered as strategic information for their activities. Technical hurdles and ethical questions must also be addressed. Arvalis and other technical institutes are currently examining possible solutions based on blockchain technology and technology allowing interoperability between different systems.