

Target group Survey Summary Report - Belgium



ITFARM

IT for Interconnection of Social, Economic and Environmental Aspects in Agribusiness

WP1 – Survey on Farms and Current Situation and Demand

Introduction and profile of the participants

The Survey on Farms and Current Situation and Demand has been conducted from May to June 2022 with two ways: online by google questionnaire design (<https://docs.google.com/forms/d/e/1FAIpQLSeLrP6K27QPpdM4qoMVyn2E4yksKubDQ4gEQ3ZJELb0KI-aWg/viewform>) and in person. Fourteen farmers in total from Wallonia region, southern of Belgium responded to this activity.

More than 71% of farm household head are over 50-year-old, in which, age of 50-59 is about 43%, and > 60 is 29%. Only 14% of farm household heads are at young generation (30-39 year-old). No one is under 30. This figure is similar to Belgian general statistics results.

As the survey focused on family farms so that farm size is very various and small, from 12 ha to 330 ha. However, most of them have more than 100 ha. Only two farms rank from 50-100 ha and under 50 ha includes 4 farms.

Concerning farm experiences, eight farmers have more than 30 years of agricultural activities while only one involves in the sector from this year (2022).

Responded farms' main scope of activities include seven in crops, one in dairy cattle raising, four in mix of animal (pork and dairy) and crops, and two in horticulture.

Technologies currently in use in businesses

Result from survey shows that there are high technologies systems applied at farm level in Belgium. The uses of high technologies system and machines depend on farm size and type of scope of their activity. It is evident that there are not much mix farms (both crops and animal) that applied the water management system for their animal raising activity compared to crops.

The result also shows that, three farms have a water management system, of which there is one "Automatic irrigation system" at horticultural farm, one "Smart irrigation system based on real-time soil moisture data" at crops farm, and one "Irrigation system with reel, advised by Vegemar" at mix farm for his crops activity. Both crops farms have medium farm size while horticultural farm has only 37 ha.



Relating to Smart fertilisation management system, there are two farms which use the system for spreading digestate flow rate proportional to progress (145 ha of farm size), and the soil analysis, use of Veris (97 ha of farm size).

Concerning Animal care system, three of five responding farms applied, of which all kinds of current technologies exist, including Animal behaviour, Animal health and welfare, Feed management, Weight management, and even Calving detection by vaginal thermometer as well as Prophylaxis when buying livestock.

For the Grass yield monitoring technology, only one farm of 330 ha at mix crops and animal raising activity applied.

Apart from above systems, six Belgian farms also apply Seeding management technology such as Air-assisted high speed precision seed metering device and Seed drill depth control system

Summary:

In summary, the types of used technologies in Belgian farms are common in:

- Soil management
- Seeding management
- Water management
- Smart fertilisation management
- Animal care
- Weather connected station

RTK system on tractors, sprayed and centrifugal section cuts by RTK, GPS guidance; Robot guiding the hoe are also existing but it is not frequent.

Positive impacts and possible obstacles or challenges in relation to their use:

The main positive impacts of applying the above technologies are as follows:

- Time saving and visibility
- Precision on farming work so that economic saving
- Environmental protection thanks to precise dosages
- Can make work easier

The main negative impacts of applying the above technologies are as follows:

- High prices
- Not suitable for small areas
- Depending on techniques and risk to lose their own competence
- Need a lot of time to be used with the technologies.

Factors affecting the process of decision-making about introducing and applying new advanced ICT technologies in the businesses

Most of responding farmers indicated that Lack of financial resources to research and purchase new technologies, High capital investment and Not being sure on the return to investment are the main factors affecting to their decision of buying new ICT technology at the farms. Complicated use, Lack of detailed information, and High technical staff required are also the reasons for that farmers have not yet favored to invest in. Only few farmers



reported that Legal problems, obstacles and challenges, Short life of new technology and government support limit their application.

Preferred types of additional training opportunities to support the process of introducing new ICT technologies in business

About 90% of responding farmers replied that they prefer to participate in a training in person while around 10 % report their favour of a hybrid form of training, both online and face-to-face with a demonstration or presentation of specific supply companies. There are three cases indicated no interest in training of ICT.

Practical skills lacking the most in order to apply advanced ICT technologies

The rank of the practical skills that responded farmers lacking the most is as follows:

- Lack of basic ICT skills
- Lack of confidence using ICT technologies
- Lack of practical knowledge of processes related to ICT technologies (applicable software, equipment etc.)
- Lack of skills to effectively identify and address the existing challenges and problems where ICT technologies could be successfully and effectively applied
- Lack of theoretical knowledge of processes related to ICT technologies (applicable software, equipment etc.)

One farmer stated that his exploitation has been run well even without any supports of those costly ICT.

Conclusions:

New ICT are currently existing in Belgian agriculture and being practiced at farms in all kinds of sectors such as crops, livestock, and horticulture. Farmer's ICT application depends on his farm size, financial resource, and return to investment. Though farmers confirmed the positive impacts of ICT used in their activities such as time and economic saving, environmental protection, work facilities, there are still many challenges that both farmers and related actors need to solve for a better adoption of new technologies.

Results also show that training is necessary and important for farmers to better apply new ICT. Basic ICT knowledge course is mostly required by farmers through a face-to-face form training.

Recommendations:

Besides providing training and raising awareness of farmers on the importance of new ICT on agricultural exploitation, we would like to suggest the following activities:

- Building a list of ICT support (financial, technical) programmes for farmers and related actors at regional, national, international levels to help them better getting benefits from current supports.
- Providing a list of actors and addresses that farmers can contact in case needed to deal with their ICT problems
- Building a cross list of common interests among farmers and suppliers in order to reduce the gaps of supply and demand on ICT.

