



Expectations and connectivity needs of dairy cattle breeding

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S1: The Digital Transformation: IoT & Data

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Background and Objectives

- Economic and structural environment : end of quotas, farm expansions, decrease of salaried work.
- New societal demands: working conditions, animal welfare, environment, quality of products.
- Development of precision farming (sensors and automatism)



→ New connectivity requirements for the farms

Data value chain in agriculture

From Farm to Fork

Consumption trends



Completion of a study



**June
2014**

➤ Qualitative inquiries in 30 farms

➤ Existing connectivity testing in 19 farms

**January
2015**

➤ Quantitative survey of 4000 dairy farmers (772 responses)

Background and Objectives

Complementary objectives :

- **Orange** → to propose a catalogue of services for agriculture through its Smart Agriculture initiative.
- **Evolution** → to know better the needs of its members in terms of connectivity to offer them effective and sustainable solutions in their environment.
- **French Livestock Institute** → to report to actors of the herbivores' sector prospective of digital developments in rural areas.

Survey Methodology

- 4000 breeders contacted by email - 772 answers (response rate: 19%)
- Dairy herds of 50 cows and more
 - representative of the dairy herds of tomorrow
- Questionnaire with 53 questions:
 - Characteristics of the breeder and the livestock
 - Connected equipments for breeding and for telecom
 - Practices of use of these equipments
 - Satisfaction / connectivity
 - Evolutions envisaged of the livestock and the equipments

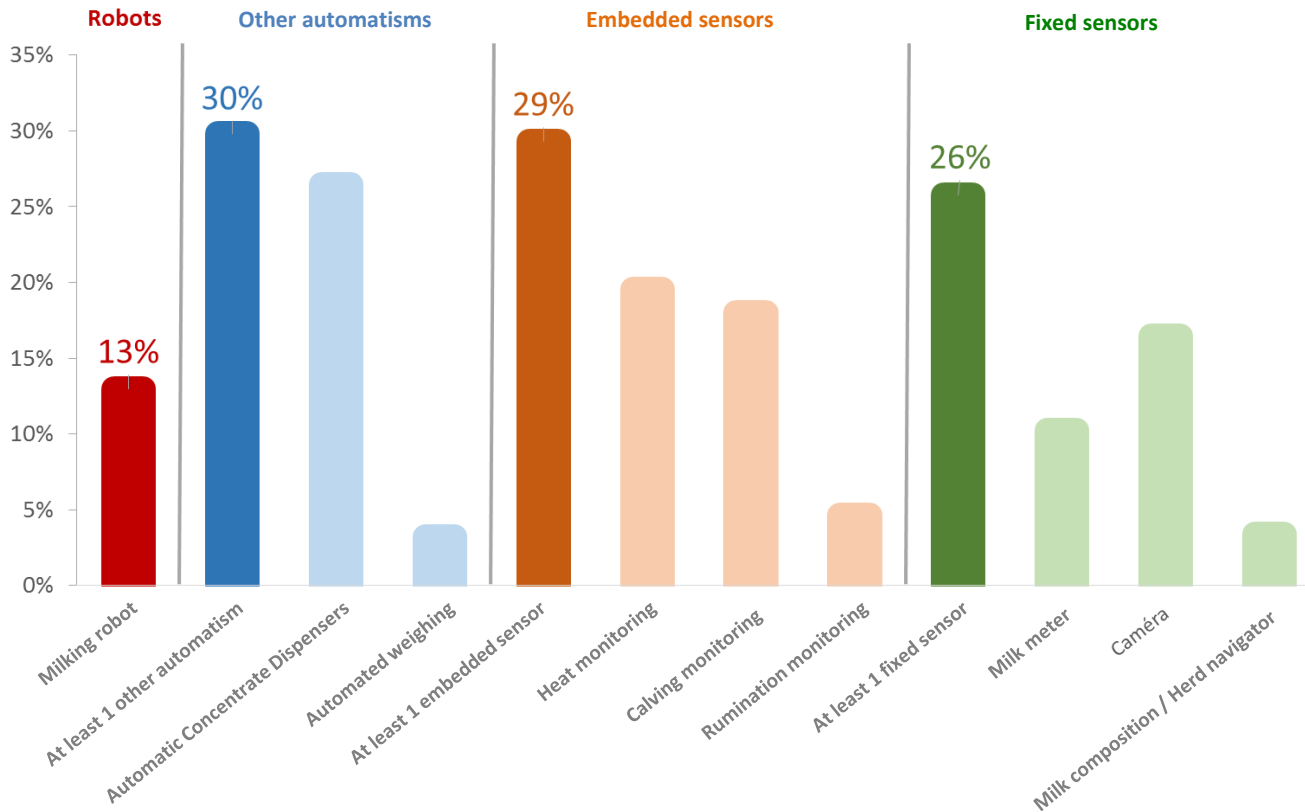
Level of confidence: 95%

E.g: if 40 % of the breeders surveyed are satisfied by the debit, the precision of the percentage is of 5 points, thus the proportion is between 35 % and 45 %.

Survey Results

Connected equipments

Internet of Things

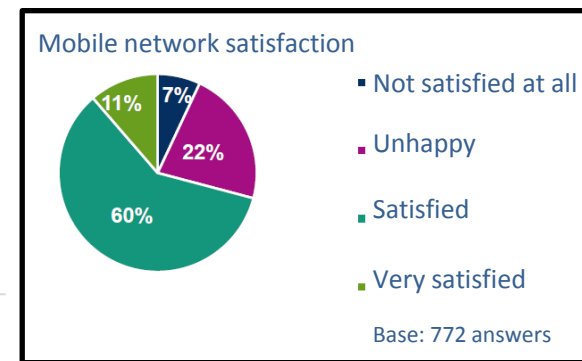
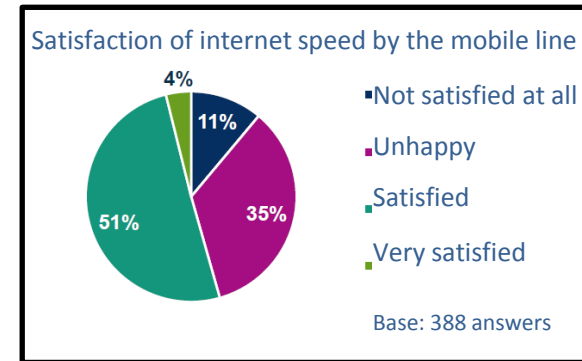
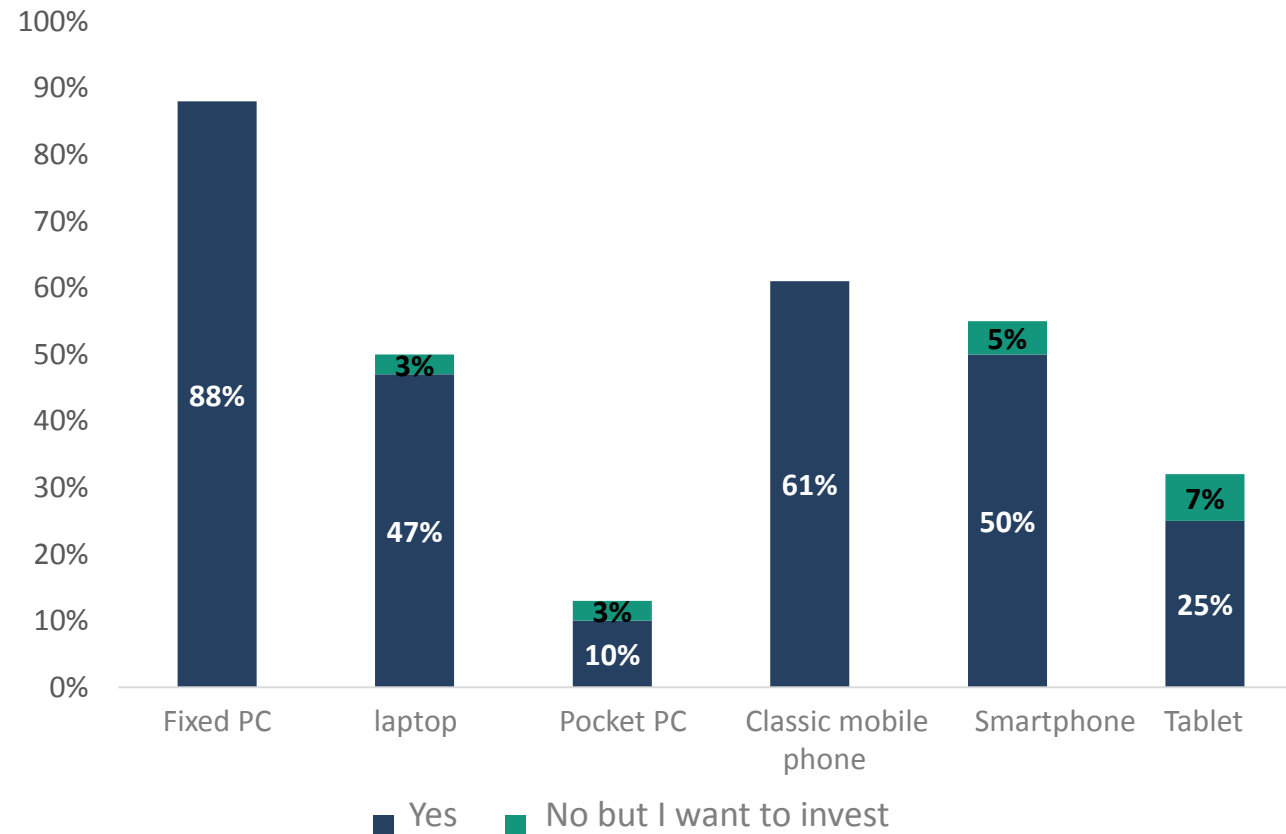


67% have at least one connected tool (87% for 100 dairy cows and +)

38 % of the unequipped breeders envisage to equip themselves in the short term

Survey Results

Telecom equipments and connectivity



Survey Results

Typology of the breedings

- Methodology: multivariate analysis then hierarchical ascending classification
- 5 very different classes:

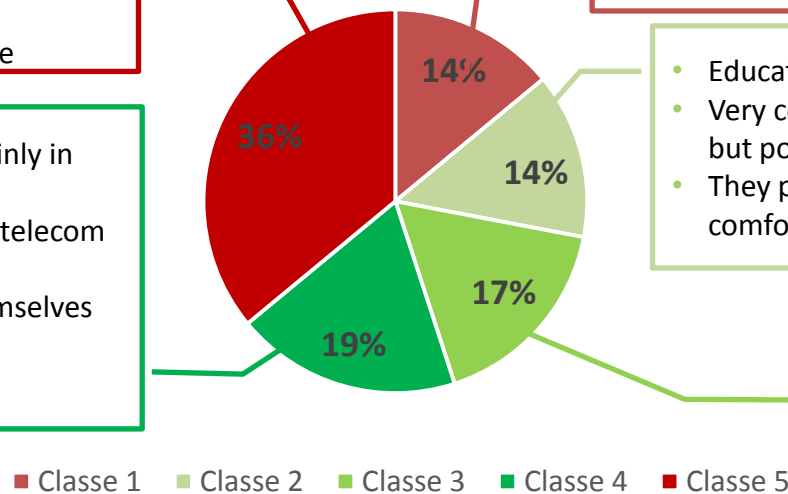
- Old breeders (50 and +), small herds, few level of education
- Shortly equipped with connected tools and Telecom
- Do not want to invest or to evolve

- Young breeders, studies \geq Baccaalaureate+2, large herds mainly in building
- Very equipped in connected and telecom tools (smartphone)
- Plan to expand and to equip themselves in the future
- Are demanding with respect to connectivity (dissatisfied)

- Breeders working alone (no employees), small grazing herds
- Shortly equipped with connected tools, but connected to the fixed Internet.
- No interest in mobile internet and no investment intentions

- Education \geq Baccaalaureate+2, small grazing herds,
- Very connected to mobile internet (smartphone) but poorly equipped in breeding tools
- They plan to be equipped in the future to win in comfort and technicality

- Breeders very equipped with Telecom tools (smartphone) and connected breeding equipment.
- Satisfied with the connectivity.
- Not considering investment because no need



Survey Results

Typology of the breedings

