

The new connectivity needs of the French dairy farms

C. Allain¹, P. Quinton², A. Philibert³, P. Cros⁴, M. Herman⁴, M. Cimino³, N. Lafont², S. Larsonneur², B. Frappat³

1 Institut de l'Elevage, Monvoisin BP 85225, F-35652 Le Rheu Cedex, France.

2 Evolution, BP30281 , 14653 Carpiquet cedex, France.

3 Institut de l'Elevage, 149 rue de Bercy, 75595 Paris cedex 12, France.

4 Orange Smart Cities and Territories, 38-40, rue Général Leclerc, 92130 Issy-Les-Moulineaux, France.

clement.allain@idele.fr (Corresponding Author)

Abstract

Automation of French dairy farms and use of sensors for herd management has been growing rapidly in recent years. Precision Dairy Farming tools used by farmers often require the use of mobile devices (smartphone, tablet, mobile phone and laptop), internet access (fixed or mobile) or mobile phone network to: receive alerts, manage their tools remotely or to use business applications. Indeed, Precision Dairy Farming creates new connectivity needs for these farms. A survey containing 53 questions was e-mailed to 4000 dairy farmers. 772 farmers responded to the survey. After a descriptive analysis, responses were processed by a multiple factor analysis (MFA) followed by a hierarchical clustering. Then a typology of farmers was established according to their individual characteristics, level of equipment, practices and their evolution prospects. 67% of these farms were equipped with at least 1 connected tool: AMS, automatic feeder or sensors. Over 1/3 of the farmers planned to invest in a new connected tool in the future months, mainly for labour or personal life comfort reasons. Concerning computer and telecom equipment, 88% had a desktop computer, 47% a laptop, 61% a conventional mobile phone, 50% a smartphone and 25% a tablet. 65% of the farmers estimated that a mobile internet access was important for their profession, but among those already equipped with a smartphone, 46% were unsatisfied of the mobile internet network, 29% were unsatisfied by the mobile phone network and 35% were unsatisfied with their fixed internet network. The analysis revealed 5 farmers profiles from the “not concerned by farm connectivity” to the “technophiles with huge needs”.

Keywords: technologies, smartphone, connectivity