## Abstract submission or motivation letter form

Precision livestock researchers workshop seminar

First name	Claudia
Last name	Kamphuis
Position	Researcher
Affiliation	Wageningen University & Research Animal Breeding and Genomics
Country	NL
E-mail	Claudia.Kamphuis@wur.nl

Abstract body or motivation letter (*half page, single space, times new roman 11p.*)

This study's overall objective is to develop innovative tools for genetic selection and management to optimise resilience and efficiency of cattle. These tools have to be applicable in widely varying environments and across systems (beef and dairy). Part of this study is developing proxies for resilience and efficiency with data from near- or at-market farm technologies. These technologies generate high-frequency repeated measures on individual animals. This information is now mainly being used to monitor, e.g., animal behaviour or animal health. However, these technologies may also have a huge potential for phenotyping resilience and efficiency, since they can track the magnitude of the animal's response and rate of recovery from environmental challenges, e.g. a heat wave. Data from several at-market farm technologies (measuring e.g., activity, behaviour, body weight, and body temperature) will be used to develop operational proxies for key components of resilience and efficiency. For resilience, the focus will be on quantifying fluctuations relative to a baseline in proxies that are indicative of a health or off-feed event. For efficiency, proxies are needed that estimate feed intake, body reserves, and heat loss. Additionally, to study resilience and efficiency of a herd, rather than an individual animal, the feasibility of drones will be explored.

Abstract title (for abstracts only): Near- and at-market farm technologies to develop proxies for resilience and efficiency

List of authors (for abstracts only): C. Kamphuis., Y. de Haas, and N. Friggens