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Irène Llach, Hugues Caillat, Alice Fatet, Sylvain Breton, Tiphaine Aguirre-Lavin, Didier Dubreuil, Alexandra Eymard, Jérôme Boucherot, Thierry Fassier, Didier Marcon, et al.

► To cite this version:

Irène Llach, Hugues Caillat, Alice Fatet, Sylvain Breton, Tiphaine Aguirre-Lavin, et al.. Use of innovative and precision tools in research stations with small ruminants: the INRAE case. 74th Annual Meeting of the European Federation of Animal Science, EAAP, Aug 2023, Lyon, France. hal-04195744

HAL Id: hal-04195744

<https://hal.inrae.fr/hal-04195744>

Submitted on 4 Sep 2023

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Book of Abstracts of the 74th Annual Meeting of the European Federation of Animal Science



Book of abstracts No. 29 (2023)

Lyon, France

26 August – 1 September, 2023

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Session 68

Use of innovative and precision tools in research stations with small ruminants: the INRAE case

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An extensive survey was carried out in experimental units (**EU**) of **INRAE** using small ruminants (**SR**) as animal model, to get insights in current and historical uses of innovative technologies in their facilities, and staff viewpoints. Eleven EU use SR in INRAE (in France and overseas); 8 were visited in 2022 (addresses in the abstract; 3 with sheep -2 meat, 2 both meat and dairy-; and 3 with dairy goats). A detailed questionnaire was prepared. A total of 58 technologies were inventoried. From that, ~24% (n= 14) are invented or co-produced by INRAE, from which 7 are appreciated i.e. automate weighing device (Baléa); sorting gates (3 exits); **DH20** (water consumption monitoring and weighing indoor); **DAC** (automatic distributor of concentrate); **DAF** (automatic distributor of forage); **Gély** test tube (individual milk yield monitoring); and Walk-over- Weighing (**WoW**). Five tools are used by 100% of EU i.e. EID for individual identification; Baléa for weighing; **PDA** (Personal Digital Assistant); temperature and humidity sensors (mandatory); and sorting gates. Interviewed staff are favourable to techs' use, but mostly for research purposes and they unanimously agreed in positive effects to alleviate workload and routine. Internet connectivity was revealed however as a serious constraint in certain areas. Four techs are recommended for farmers, recognising price may limit adoption: conveyor belt for feeding supply indoor; mixer (with tractor) for preparing total mixed rations; milk tank weighing; **Combi clamp** (to ease handling). The P3R EU is the best example of phenotyping EU with promising and effective techs for both research and management purposes. Information will be completed, with further upcoming visits to 100% of EUs.