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### ► To cite this version:

Jean-Pierre Goby, Carole Bannelier, Thierry Gidenne. Nutritive value of cabbage and pelleted complete feed in free-ranged organic growing rabbit.. 72th EAAP annual Conference, Aug 2021, Davos, Switzerland. hal-03623347

**HAL Id: hal-03623347**

**<https://hal.inrae.fr/hal-03623347>**

Submitted on 29 Mar 2022

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**Nutritive value of cabbage and pelleted complete feed in free-ranged organic growing rabbit***J.P. Goby<sup>1</sup>, C. Bannelier<sup>2</sup> and T. Gidenne<sup>2</sup>**<sup>1</sup>Université de Perpignan, IUT agronomie, Chemin Paso Vella, 66962 Perpignan, France, <sup>2</sup>INRAE Occitanie Toulouse, GenPhySE, BP27, 31326 Castanet-Tolosan, France; [thierry.gidenne@inrae.fr](mailto:thierry.gidenne@inrae.fr)*

Free-ranged organic rabbit correspond to the consumer's demand of improved animal welfare conditions, but lacks in technical reference values and nutritive value of plants available at farm. We thus studied the digestibility of cabbage (broccoli, leaf stage) and of commercial pelleted feed for three groups of 5 growing rabbits (74 days old, mean live weight = 1,830 g) housed individually in movable cages on pasture and following organic regulation for rabbit farming. Each cage had a shelter of 0.4 m<sup>2</sup> and a pasturing surface of 1.2 m<sup>2</sup>. The group C was fed only with cabbage (500 g fresh on morning and on evening), the group P with pelleted feed only, and the group CP was fed with cabbage + 60 g/d of pelleted feed. After one week of adaptation to movable cage and feeds (74-81 d old), the digestibility was measured for four days, with feed intake and faecal total collection measurement (a board was installed on the cage floor to collect the faeces). During digestibility period, the dry matter (DM) intake of cabbage averaged 95.5 g/d per rabbit of the group C, corresponding to a daily fresh intake of 664 g. Pellet intake of the P group averaged 240 g DM/d, while in CP group the cabbage intake averaged only 54.5 g DM/d for a pellet intake of 53.9 g DM/d. The cabbage contained a high content of ash (19.4%) for a protein content of 18.4% and a fibre content of 23.1% of NDF and 16.6%ADF and 4.5% ADL. Organic matter (OM) digestibility of cabbage was very high (85.0%) as well as for crude protein and energy digestibility (85.4 and 81.7% respectively). Cabbage digestible protein and energy content (direct measure), fed alone, thus averaged 158 g PD/kg and 12.16 MJ DE/kg. The commercial pellet nutritive content (group P) was moderate (9 g PD/kg and 8.76 MJ DE/kg). When the cabbage was fed freely and complemented by 60 g/d of pellets (group CP), the DM digestibility was reduced proportionally to the pellet intake (49.7% of the total intake), and averaged 65.9%, similar to that recalculated from C and P values (67.8%). Thus, mixing cabbage with pelleted feed did not alter the nutritive value of the cabbage.

**Effect of feed competition on activity and social behaviour of gestating sows***M. Durand, A. Julienne, J.Y. Dourmad and C. Gaillard**INRAE, Institut Agro, PEGASE, Le Clos, 35590 Saint Gilles, France; [maeva.durand@inrae.fr](mailto:maeva.durand@inrae.fr)*

Since 2013, in EU, gestating sows are housed in groups. Even with automatic feeders, depending on individuals (i.e. age, hierarchy, weight) or groups (i.e. number of sows per feeder) characteristics, sows spend time and energy accessing feed which might modify their nutrient requirements, due to changes in their physical activity. The aim of this study was to evaluate the impact of an induced feed competition on the activity and social behaviour of gestating sows. A feed competition was set up by closing during 5 days (test period) one of the two feeders available in a pen housing 15 sows on average, doubling the number of sows per feeder. The previous week with the two feeders opened served as control (basal period). A total of 31 sows were included in the experiment. Skin lesions were visually recorded every week. Feeding behaviour was automatically recorded by the feeders. Videos recordings allowed to manually identify different behaviours: position, occupation, location in the room, and social interactions. The influence of the period (basal vs test) and parity (primiparous vs multiparous) on these measurements was analysed on R applying a linear mixed-effects model taking into account the random effect of the sows. The behaviour of the sows was impacted by the feed competition. During the first 36-h of test period, the number of visits to the feeder without receiving feed decreased compared to the basal period (2.3 vs 4.7 visits/d,  $P < 0.01$ ) while the number of visits with feed was not affected by period (1.1 visit/d). During the test period, the sows were waiting more in front of the feeder than during basal period (98.5 vs 40.1 min/d,  $P < 0.01$ ). Despite the increased number of negative social interactions during the test period (i.e. head shots, bites,  $P < 0.01$ ), there were no significant effect on the number of skin lesions. These results show that sows were more active and express more negative social interactions during a feed competition test. It can be calculated that this resulted in about 5% increase of their energy requirement. The number of sows per feeder is thus an important parameter to consider for improving gestating sows' welfare and calculating their energy requirements.