

Establishing forage turnips in the pasture for gestating sows

Problem

Gestating sows on restricted diets are hungry. At pasture, there is also a risk that they are damaging the pasture by their high rooting activity. Forage turnips (*Barkant Brassica Turnip*) in the pasture have great potential to serve as supplementary feed and behaviour enrichment for gestating sows.

Solution

Gestating sows fed either 60 or 100% of their commercial diet had access to pasture with established forage turnips (Figure 1). The study aimed to evaluate the feasibility of establishing turnips and its potential as nutrient resource and behaviour enrichment for the sows.

Benefits

By establishing turnips, the sows will be supplied with foraging material, so the turnips can serve as a nutrient source and as behavioural enrichment. Moreover, this can reduce pasture damage caused by excessive rooting.

Applicability box

Theme

Pigs, gestating sows, ration planning, crop rotation

Context

To be included in crop rotation and outdoor grazing season

Application time

Summer grazing

Required time

During seeding and grazing season

Period of impact

July-September (northern Europe climate)

Equipment

Seeding equipment with drill with doubled spacing (e.g. 25 cm)

Best in

Piglet production, gestating sows' outdoor pasture

Practical recommendation

- Sows consumed forage turnips, roots and leaves, very well and gestating sows were hungry even at 100% commercial feed ratio (Figure 2).
- Consumption of forage turnips was around 1.1 kg dry matter per sow and day, corresponding to 11.2 MJ NE/sow and day
- Poor establishment of forage turnips resulted in too little energy for the restrictively fed sows. They had to use their own body reserves and lost in body condition and weight (Figures 3 and 4).
- The average number of weaned piglets was very low (8.4 and 8.5 piglets/sow) in both the treatment and the control group. This was probably due to a fire in a nearby unit, which made the sows very stressed.
- To increase the yield of forage turnips, they might be seeded in combination with e.g. white clover.
- A drill with doubled spacing (e.g. 25 cm) might lower a high weed pressure.
- Theoretically, up to 40% lower feed ration might be replaced by forage turnips. However, there need to be enough forage turnips in the field in order not to risk poor sow body condition and weight losses during gestation and post farrowing.
- Forage turnips can serve as behaviour enrichment to restrictively fed sows and have the potential to lower accumulated land use by reducing rooting activity.



Figure 1. Pasture with established forage turnips (large picture) and a forage turnip (small picture). Photos: Ingela Löfqvist and Magdalena Presto Åkerfeldt.

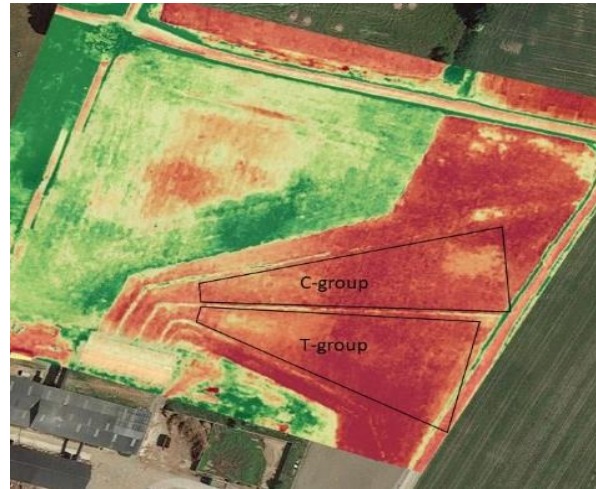


Figure 2. The fields after the sows had been grazing there. Sows in the C-group were fed 100% and sows in the T-group were fed 60% of the commercial feed. Photo: Ingela Löfqvist.

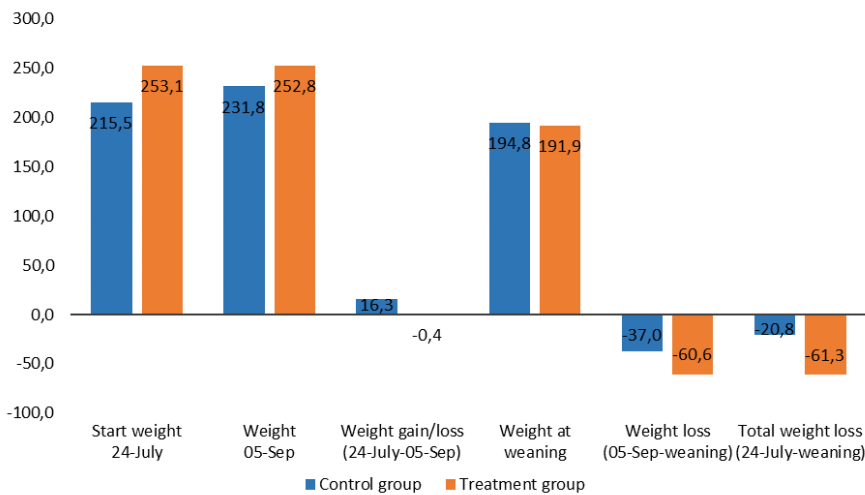


Figure 3. Average sow weight (kg) at start, after 6 weeks and at weaning, and their average weight gain/loss for the two groups.

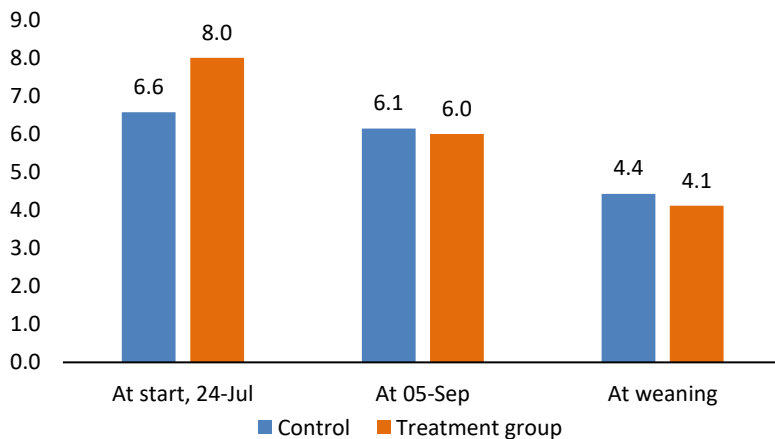


Figure 4. Average sow body condition during the test (start-weaning). Average body condition loss (graded values) was 3.9 for the treatment group and 2.1 for the control. Graded values 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 corresponded to body condition scores 1-, 1, 1+, 2-, 2, 2+, 3-, 3, 3+, 4-, 4 and 4+, respectively.

Further information

Video

- Check out the following video "[Establishing forage turnip in the pasture outdoor area as supplementary feed to gestating sows](#)"

Weblinks

- Check the [Organic Farm Knowledge](#) platform for more practical recommendations.

About this practice abstract and OK-Net EcoFeed

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Permalink: [Organic-farmknowledge.org/tool/39514](https://organic-farmknowledge.org/tool/39514)

OK-Net EcoFeed: This practice abstract was elaborated in the Organic Knowledge Network on Monogastric Animal Feed project. The project is running from January 2018 to December 2020. The overall aim of OK-Net EcoFeed is to help farmers, breeders and the organic feed processing industry in achieving the goal of 100% use of organic and regional feed for monogastrics.

Project website: ok-net-ecofeed.eu

Project partners: IFOAM EU Group (project coordinator), BE; Aarhus University (ICROFS), DK; Organic Research Centre (ORC), UK; Institut Technique de l'Agriculture Biologique (ITAB), FR; Research Institute of Organic Agriculture (FiBL), CH; Bioland, DE; Associazione Italiana per l'Agricoltura Biologica (AIAB), IT; Donau Soja DS, AT; Swedish University of Agricultural Sciences, SE; ECOVALIA, ES; Soil Association, UK.

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