

Innovative farming in Switzerland: the “pig caravan”

Description

The farm “Silberdistel” in Switzerland invented a self-contained mobile pigsty, to fatten pigs on permanent grassland, while protecting the soil and maintaining the grass cover. The so-called “pig caravan” comprises a sheltered lying area, a drinking and feeding station and even a water bath for the hot season. The floor outside of the shelter is slatted, letting faeces and urine fall onto the pasture, limiting the need for cleaning. The platform weighs 4.5 tons, is moved by tractor and provides sufficient space for up to 10 growing-finishing pigs. Furthermore, the platform has doors to both the left and right side, allowing the farmer to alternate between two pastures, facilitating pasture management. The pig caravan is used for the farm’s growing-finishing pigs, housed full-time on the pasture during the vegetation period, lasting from April to October. In the winter months, growing-finishing pigs are moved indoors to protect the sward. During the growing season, all breeding sows and piglets have access to pasture which is divided into different paddocks so that soil fertility is maintained.

Pasture management

The farm aims to maximise pasture productivity and efficiency, using holistic grazing management. Their grazing rotation includes cows, goats, pigs and chickens. When the caravan is placed at a certain spot, the farmer fences off two areas of around 10 x 10 m on both sides of the caravan. Pigs are given access to one of the two grazing areas for 3 to 7 days. When the farmer notices that the pigs start to uproot the grass, the grazing area is switched to the other side, using the trailer’s doors. In this manner the two grazing areas are alternated for 10 to 14 days. Then, the farmer moves the pig caravan to the next spot, sows grasses or herbs into the uprooted



Farm Portrait

Location

Canton Solothurn, Switzerland

Topography

Flat to steep hills

Farmland

44 ha: 0.5 ha pasture for growing-finishing pigs

Size of pig herd

3 sows and 7-10 growing-finishing pigs

Farming system

- Growing-finishing pigs are housed on the pasture from April to October, in winter they are housed indoors.
- Sows and their piglets are housed indoors with concrete outdoor run and access to pasture during growing season.





The "pig caravan" can easily be moved with a tractor, thanks to its two wheels and coupling device.

patches of the sward and lets the area rest for 30 to 60 days. With this system, the farm manages to maintain a grass cover of 80 %.

Animal welfare

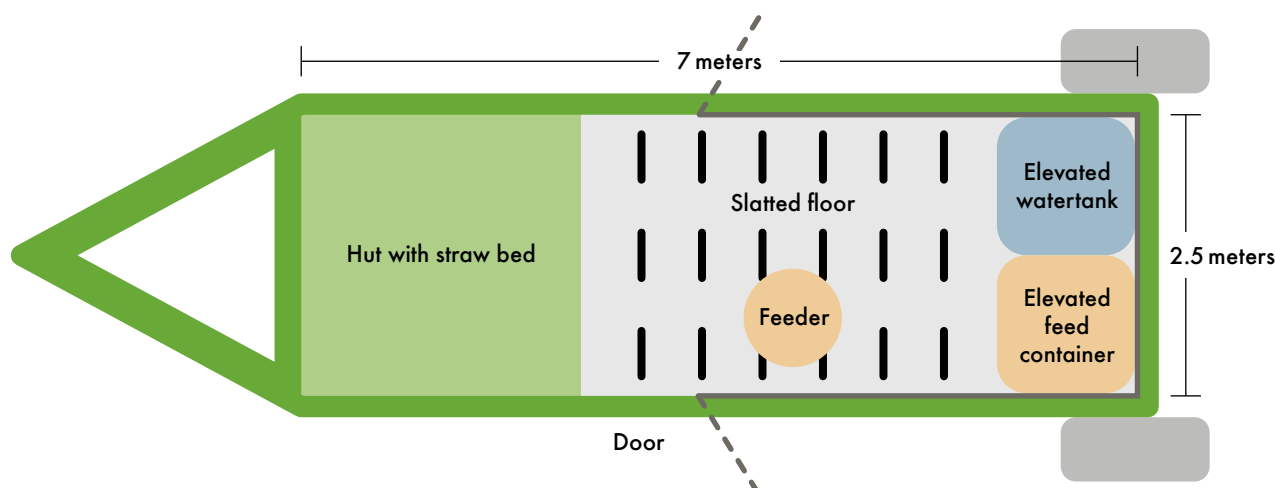
The system is very beneficial to animal welfare. Grazing satisfies the pigs' need to perform exploratory behaviour by foraging. The regular changes of pasture area provide recurrent novelty of the environment and are beneficial for the curious animals. In addition, changes in pasture area and the intact sward also maintain hygienic conditions. The result is healthy and clean animals without any kinds of lesions. Pigs in the system seldomly need medication, in particular antibiotics.

Environmental impact and productivity

Compared to fattening growing-finishing pigs indoors with concrete floors, the pig caravan provides several environmental advantages. During the summer, all faeces are deposited on the pasture, which reduces ammonium emissions. The contact area of the caravan is limited to the steel beams and the wheels, leaving the vegetation and soil structure under the trailer largely intact. Besides grass from the pasture, pigs are fed waste products from flour and dairy production, increasing resource efficiency.

Table 1: Animal welfare assessment

Age group	Welfare parameter	Assessment during project period
Finishers	Soiling	In 1 out of 4 pens <33 % of all animals
Finishers	Runts	Not detected
Finishers	Ectoparasites	In 1 out of 4 pens detected
Finishers	Ocular discharge, eye inflammation	Not detected
Sows	Soiling	1 out of 8 sows soiled with mud
Sows	Thin sows	Not detected
Sows	Vulva lesions, deformations	Not detected
All animals	Skin lesions (scratches)	Not detected
All animals	Ear, shoulder, tail lesions, swellings or short tails	Not detected
All animals	Lameness	Not detected



Floorplan of the “Pig caravan”. The platform is big enough to accommodate 10 growing-finishing pigs. The substructure consists of a rigid iron beam frame. It supports the concrete slatted floor on the rear-end and wooden floor on the front-end that is covered and therefore protected from rain. The Caravan can be moved by lifting it with tractor linkage drawbar on the front-end and then it rolls on his two wheels on the rear-end.

Table 2: Productivity

Productivity	
Average no. of pigs fattened / ha / year	50
Average weight at slaughter [kg]	120
Average age at slaughter [months]	8–10

Labour and cost

- It took the farmer 3 weeks of labour to construct one pig caravan.
- Expenses for one pig caravan: 6,000 CHF.
- Moving of the pig caravan takes on average 15 minutes. Additional time is needed for fencing.
- The farmer spends on average 5 minutes daily with inspection and feeding of the pigs.

Take away lessons

- A well designed caravan including shelter, feeding and drinking station, together with frequent pasture rotation, allows fattening of healthy pigs on pasture without destroying the grass sward.

Further informations

- **FiBL (2019):** Sau Karavan - Bodenschonende Schweinehaltung auf Dauergrünland (Core Organic POWER). Video. Research Institute of Organic Agriculture FiBL, Frick. Available at: www.youtube.com [Link].
- **Webpage of the farm:** www.silberdistel-kost.ch [Link]

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