

# Influence of different straw bedding management on welfare of growing pigs in low environmental impact farming system

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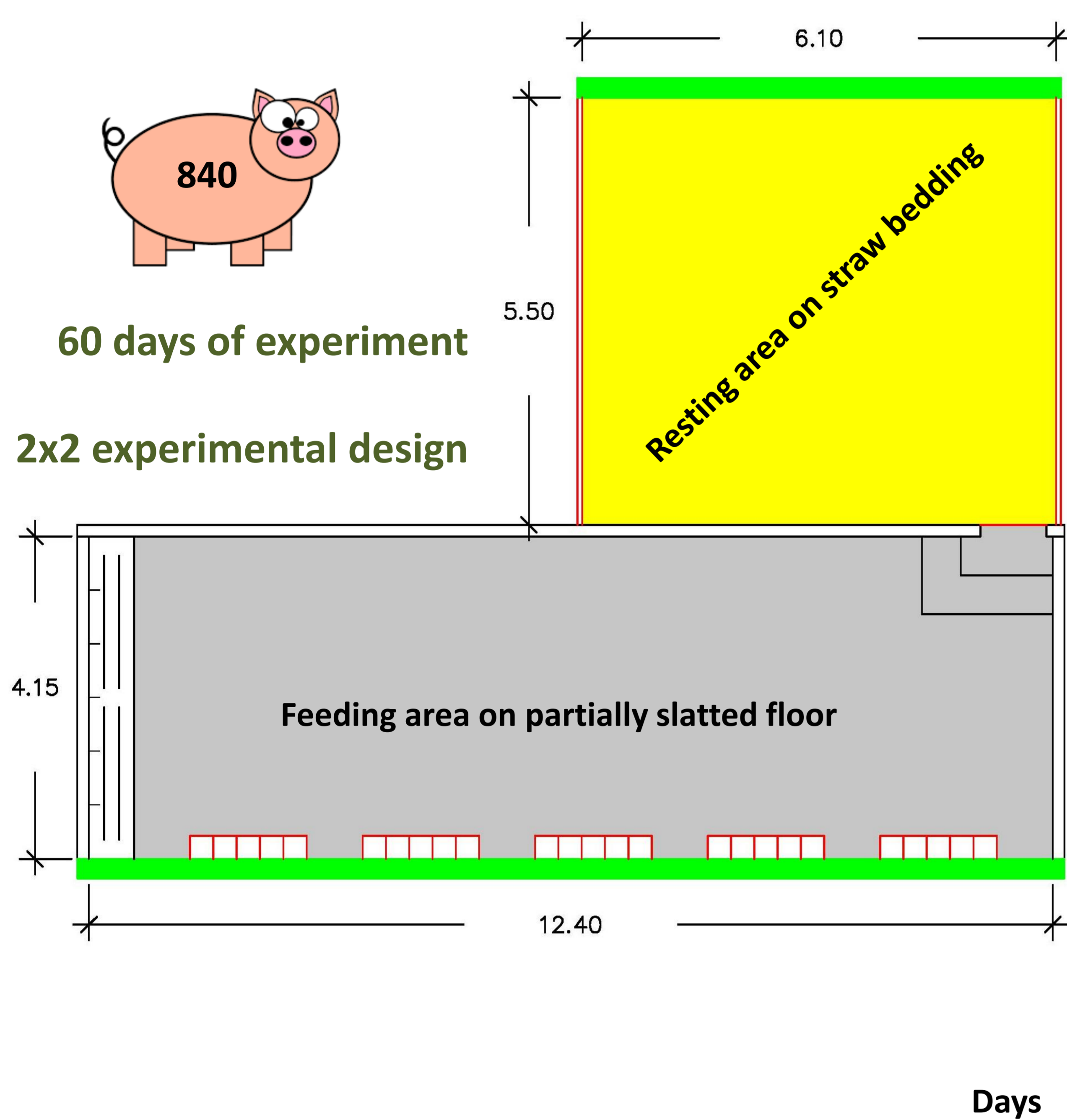


- Straw bedding is the most effective environmental enrichment for pigs housed in intensive farms
- Exploratory behaviours are facilitated and negative behaviours reduced
- Straw produces pig manure of high quality
- Low environmental farming systems is based on nutrient recycle and production of renewable energy

The aim of this study is to evaluate the welfare of growing pigs in a straw-based housing system with different quantity of straw provision and frequencies of bedding removal



This research promotes the implementation of sustainable farming systems taking into account animal welfare and environmental protection



Quantity of straw provided

LQ = 250 g/pig/die

HQ = 450 g/pig/die

Frequency of removal

LF = additional bedding added at day 30

HF = bedding removed and replaced every 15 days (1° month) and every 7 days (2° month)

- ✓ Cleanliness of bedding
- ✓ Cleanliness of pigs
- ✓ Lesions of pigs

30 45 60

## Quantity of straw:

- influenced the cleanliness of the bedding with LQ dirtier (74.24%) than HQ (61.97%),
- significant influenced the cleanliness of pigs differences with LQ (P=0.002) dirtier than HQ (P=0.013).

## Frequency of removal:

- did not influence the cleanliness of both bedding and pigs.

To remove and replaced the straw in HF, the pigs were enclosed in the feeding area. Nevertheless, the incidence of lesions was negligible and not different between groups.

- High quantity of straw provided showed advantages in terms of welfare compared to the quantity suggested in straw-based systems (200-250 g/pig/die).
- Adding straw during the production cycle is sufficient to assure a good management of the bedding.

Further research is needed to evaluate the economic impact of the quantity of straw provided, considering the adding value of a good quality and more sustainable biogas production.

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