

Mammalian pest problems in organic pig farming, preventive measures and control

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Introduction

Organic pig farming includes having pigs in open fields with relatively close contact to the wild fauna. The risk of transmission of parasites and diseases to the pigs is therefore higher than in traditional pig farming with pigs under more controlled conditions in indoor pigsties. Newborn and sucking pigs are also exposed to predators that may cause losses to the farmers.

A general trend in organic farming is to avoid the use of pesticides. There is therefore a need for effective preventive measures and control methods that are acceptable to the organic farmers.

Materials and methods

As a first step in a project for developing strategies for pest management in organic pig farming we conducted a questionnaire survey in Denmark. The farmers were asked questions about what they considered problems arising from the natural environment. They were also asked to describe how they offered fodder and water, which types of huts they used etc. The surroundings should be described regarding factors that were thought to influence the natural fauna, such as e.g. distance to hedgerows, forests, streams and watercourses.

The answers given by the farmers were analysed as to possible relationships between occurrence of and / or problems with rodents and the practice regarding the pig farming.



Results

The results of the survey showed that

- Rats and smaller rodents (mice and voles), foxes and hares were the most frequently occurring mammals in the fields with pigs
- The farmers considered rats and foxes as causing the most important (pest) problems
- Occurrence of rats is reported significantly more frequently in organic pig farming than in traditional pig farming in open fields

Factors significantly positively correlated with occurrence of rats and smaller rodents:

- Occurrence of foxes
- Stacks of hay and straw in the fields
- Use of automatic feeding systems
- Use of open water trays

Factors significantly negatively correlated with occurrence of smaller rodents:

- Use of huts with a bottom

Species of huts made of hard pigsties or huts made of bales of straw did not give a significant positive correlation with occurrence of rodents.

Conclusion

These results indicate factors that are practicable as preventive measures against rodents.

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