

Summary of:

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## Self-medication by pigs in organic livestock farming

Desk study to find a new concept for animal health care. Ideas for practice and research

### Summary

There is a need in organic livestock farming for a less 'chemical' and more 'natural' approach to disease. When selecting a complementary medicine or therapy the choice is complicated by the broad range of therapies available, all with their own body of ideas. If we look at how wild animals deal with sickness and health we can use this as a starting point for choosing a therapy. There are countless documented examples of how wild animals deal with sickness and health, for example by eating therapeutic plants or other medicinal raw materials. This principle is called self-medication and both preventive and therapeutic examples are known. Phytotherapy is a therapy based on therapeutic plants which, combined with the principle of self-medication, could be applied in animal health in organic livestock farming. An advantage of self-medication can be that animals that feel unwell can help themselves and perhaps prevent the disorder from becoming clinical, while it is still not visible to the farmer.

The aim of this study is to be able to make recommendations for research into a type of animal health care based on self-medication by pigs and phytotherapy. The information is collected by studying specialist literature and consulting experts in the field of animal ecology and the management of large grazers in nature reserves.

Wild animals eat therapeutic plants, bones, minerals, salts and pure clay to stay well or to get well. We know from a large number of observations that self-medication by wild animals is a common strategy for maintaining health. Wild animals differ fundamentally from (organic) farm animals in that they range over a far greater area so that infection pressure stays lower, and they also live in a far richer environment, where numerous therapeutic plants and other raw materials are available. Furthermore, they live longer and in a richer social environment, so that they are able to learn from (older) animals of the same species. It looks as though, for use in pig farming, the opportunities for self-medication are greatest in more or less stable groups with pasturing, as is the case for pregnant sows.

We looked at evidence of self-medication in wild pigs and large grazers in nature reserves. The diet of boars and pigs which have run wild does include plants which can also be used medicinally, but the dividing line between eating plants as part of the normal diet and eating them because of their specific properties is unclear. The blurred line between nutrition and medicine is characteristic of self-medication, particularly where prevention is concerned. We know a little more about large grazers (horses and cattle) in nature reserves, because it is easier to make observations of these relatively tame animals. The annex contains a list of plants known to have medicinal properties which are eaten by boars, wild pigs and large grazers. They are not however eaten all year round, and only certain parts of certain species are eaten in particular seasons.

Phytotherapy is the use of medicinal plants or parts of plants to promote or restore health. It is used in both complementary and conventional medicine. In complementary medicine it is more common to use the whole plant, including the drug and the secondary substances, rather than just the purified substance. It looks as though phytotherapy can make a valuable contribution to health care in organic livestock farming, but it is as yet in its infancy. When combined with the principle of self-medication, which is most in keeping with natural behaviour, it is pioneering. Finally we make some recommendations for future research topics and creative applications in livestock farming practice.

The health of organically farmed pigs is generally good. Follow-up research could address endoparasites and general resistance.

### Introduction to the research questions

*This chapter gives an overview of the purpose of this study, the research questions and the methods used.*

In organic livestock farming we both wish and need to give more attention to a less 'chemical' approach to disease. European regulations on organic animal production after all only permit the use of a limited number of treatments

with normal medicines per production cycle (EU Regulation 1804/1999). Irrespective of statutory obligations, both farmers and consumers consider that complementary medicine is better suited to the nature of organic agriculture. However, we do not as yet have a great deal of experience in the use of complementary medicine in livestock farming. Complementary medicine covers a broad spectrum, ranging from homeopathy to acupuncture, each branch area having its own distinct philosophy. This variety can make the selection of a specific therapy difficult, and this is reinforced by the fact that few studies have yet been done to evaluate the success of complementary therapies (Baars et al, 2002).

The way wild animals deal with sickness and health can serve as a starting point in selecting a therapy. There are numerous documented examples of the way in which wild animals prevent diseases and ailments and how they subsequently behave if they nonetheless experience health problems (Engel, 2002), for example by eating therapeutic and often highly poisonous plants. This principle is called self-medication. Phytotherapy is the use of medicines whose only active ingredients are plants, or parts of plants or contain materials or combinations of materials in raw or processed state with the aim of maintaining or promoting health (Van Asseldonk, 2002a). This report considers the extent to which a health care concept for organic pig farming can be developed based on medicinal plants and self-medication.

#### Purpose of this study

To be able to make recommendations for practice and research into a new concept for animal health care based on self-medication by pigs, medicinal plants and other natural raw materials.

The most important questions are:

- What is the current state of animal health in organic pig farming? Are there specific problems?
- What vision is there of health and disease in organic livestock farming?
- What is self-medication and to what extent can it be applied in organic pig farming?
- What strategies do boars, wild pigs, and other ungulates adopt to stay healthy? Do they use plants or other natural raw materials in their diet which are known to have a therapeutic effect?
- To what extent can phytotherapy contribute to the health of organic pigs?

#### Methods

Information is collected by studying specialist literature and experts in the fields of animal ecology and the management of large grazers in nature reserves.