Practice abstract

Medicinal plants to limit parasitism and pathogenic bacteria in pigs

Problem

The use of antibiotics and synthetic anti-parasitic drugs can induce resistance in bacteria and parasites threatening health and welfare of pigs in low-input and organic outdoor production systems. Subsequent consequences for production and reproduction have economic impact and jeopardize the farm sustainability.

Solution

Use medicinal plants instead of antibiotics or allopathic anti-parasitic medicines, improve health and welfare by controlling parasitic diseases and harmful bacterial load while enhancing the individuals' immunity. Provide to pigs with a well-balanced, weight and age category tailored feed supplement formulated with selected, locally available medicinal plant powders.

Benefits

- Control and containment of parasitic diseases and pathogenic bacteria load in pigs
- Enhanced immunity
- Improving the health and welfare of swine
- The local plants, administered in the feed for swine as individual powders or in presented combinations, in recommended dosages, as ready-to-use formulas, enhance the farmers' task to increase production and reduce disease control costs
- Providing an environment and consumer-friendly solution to disease control, by avoiding the release of chemicals in the environment and swine products
- Traditional knowledge is valorised

Applicability box

Theme

medicinal plants, parasite and pathogen prevention and control

Keywords

animal welfare**,** animal health, swine, medicinal plants, disease control, disease prevention, parasitology.

Context

No geographical constraints

Application time

At all seasons

Required time

No extra time required

Period of impact

All seasons

Equipment

No specific equipment required

Best in

Low-input and organic production systems

Practical recommendations

- The medicinal and aromatic plants tested within the PPILOW project were *Calendula officinalis, Cucurbita pepo, Artemisia absinthium, Satureja hortensis, Allium sativum* and *Coriandrum sativum* (Picture 1). They all share similar biological and biochemical properties in their native areas
- The plants could be cultivated, collected and then dried according to internationally available, standard technologies
- The powdered plants can be used all along the calendar year in suckling piglets, weaned pigs and sows according to the dosage recommended by Baies et al., 2023-2024 (see Further reading section). The quantities of plants depend on the parasitic load and the weight of the animal
- Veterinarians and experts in authorized laboratories should perform efficacy control subsequent to medicinal and aromatic plant administration to pigs

Medicinal plants to limit parasitism and pathogenic bacteria in pigs. PPILOW Project practice abstract.
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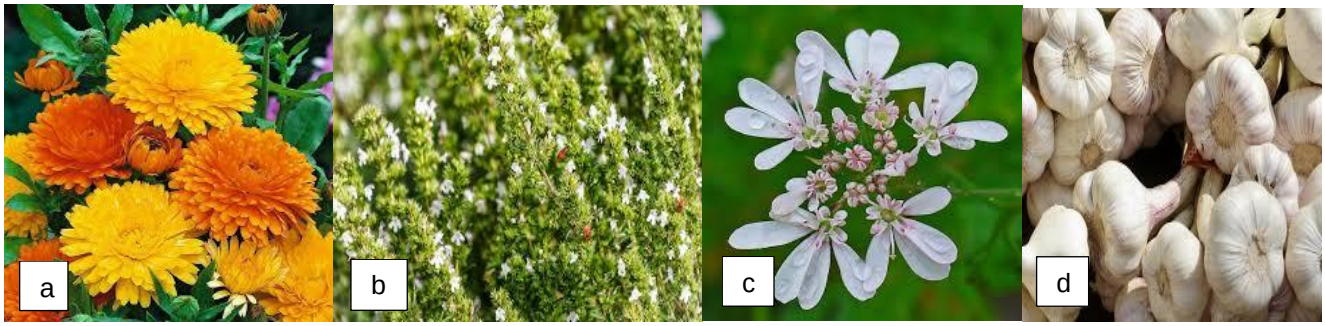

Picture 1: The six medicinal and aromatic plants tested within the PPILOW project with antiparasitic, antibacterial and immune enhancing effects: *a- Calendula officinalis*, b- *Satureja hortensis* L, c- *Coriandrum sativum*, d- *Alium sativum*, e- *Cucurbita pepo*, *f-Artemisia absinthium*.

Further information

Video:

- PPILOW webseries #6 Phytotherapy in pig breed

Further reading

- Băieş, M.H., COTUŢIU, V.D., SPÎNU, M., MATHE, A., COZMA-PETRUȚ, A., BOCĂNEŢ, V.I., COZMA, V., 2023. *Satureja hortensis* L. and *Calendula officinalis* L., two Romanian plants, with *in vivo* antiparasitic potential against digestive parasites of swine. *Microorganisms* 11, 2980 (ISI, IF: 4.5)
- Băieş, M.H., Cotuţiu, V.D., Spînu, M., Mathe, A., Cozma-Petruț, A., Miere, D., Bolboacă S.D, Cozma, V., 2023. The effects of *Coriandrum sativum* L. and *Cucurbita pepo* L. against gastrointestinal parasites in swine: An *In vivo* study. *Microorganisms* 11, 1230 (ISI, IF: 4.5)
- Băieş, M.H., Cotuţiu, V.D., Spînu, M., Mathe, A., Cozma-Petruț, A., Bolboacă, S.D., Engberg, R.M., Collin, A., Cozma, V., 2024. *In vivo* assessment of the antiparasitic effects of *Allium sativum* L. and *Artemisia absinthium* L. against gastrointestinal parasites in swine from low-input farms. *BMC Veterinary Research* 20, 126 (ISI, IF: 2.6)

Weblinks

- www.ppilow.eu
- www.zooparaz.net
- Check the Organic Farm Knowledge platform for more practical recommendations.

About this practice abstract

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