

Factsheet

A European roadmap for reducing contentious inputs used in livestock production (antibiotics, anthelmintics, vitamins)

The RELACS project aimed at developing alternative products and tools to reduce the use of contentious inputs in livestock production, namely anthelmintics, antibiotics and vitamins. Two complementary techniques, acting at different stages in the worm life cycle, have been tested as alternatives to anthelmintics. For antibiotics, RELACS aimed to adapt preventive herd health management tools to local conditions and to develop new mastitis treatments with essential oils. Finally, two strategies to reduce the use of B and E vitamins in livestock production have been explored: updating data on vitamin requirements and developing competitive non-GM high-yield yeast strains producing vitamin B2.

The alternatives tested by RELACS show good potential for the reduction of anthelmintics, antibiotics and vitamins. However, despite promising research outcomes, the uptake of alternatives by farmers is not straightforward. Therefore, RELACS has worked on:

- Assessing the acceptability of the alternatives by farmers;
- Identifying with stakeholders of the organic sector and EU policymakers the measures that would facilitate the implementation of alternatives in practice.

This multi-actor approach and fact-based dialogue allowed the development of a “European roadmap to reduce contentious inputs in organic livestock production”, with the aim to propose fair, reliable and implementable rules and agree on realistic reduction pathways for anthelmintics, antibiotics, and vitamins.

Reduction pathway for anthelmintics, antibiotics and vitamins

The results of the RELACS project show there is a lot of potentials to reduce the use of anthelmintics thanks to the two anthelmintic alternatives assessed, but they cannot strictly replace anthelmintics. As for antibiotics, it is not possible to envisage a complete phase-out in organic farming, but preventive herd health management tools show good potential to reduce their use in the short term. In the medium-term, antibiotic reduction strategies could be complemented with essential oils or other herbal veterinary medicinal products. In both cases, a holistic strategy should be adopted, where immune response and nutrition will help control parasites and diseases.

According to the results of the RELACS project, there is big potential to reduce the use of vitamin E and vitamin B2 in organic livestock feeding, by updating the recommendations for vitamin supplementation in organic livestock production. However, these vitamins cannot be completely phased out of the diets without significantly endangering animal health.

Components of anthelmintic reduction pathway

- Preventive measures: enhanced immunity, clean grazing, nutrient supplementation
- Use of bioactive forage such as heather
- Biological control using “worm-eating” fungi such as *Duddingtonia flagrans*
- Regular monitoring of the animals, for example through faecal egg counts, and weight or body condition measurements

Components of antibiotic reduction pathway

- Use of the RELACS Animal Health and Welfare Planning (AHWP) Protocol (collecting data on health and welfare for monitoring and advisory support)
- Farmers Field School (peer to peer advisory groups)
- Traditional use of herbal products

Components of vitamin reduction pathway

- Updated recommendations for vitamin supplementation
- Better knowledge on the level of native vitamins in the raw feed of organic animal diets
- Increased supply from controllable European sources of vitamin B2 produced without the help of GMOs



RELACS policy recommendations for enabling the reduction pathways of anthelmintics, antibiotics and vitamins E and B2 in organic farming

- **Invest in research to increase scientific and practical knowledge of the alternatives**, especially regarding their efficacy and the inclusion of these alternatives into animal health strategies. Further research is also needed to identify more plants or active compounds that can act as anthelmintic and antibiotic alternatives and to determine native vitamin concentrations in raw materials of organic diets.
- **Involve farmers through participatory research** and implement on-farm trials.
- **Adapt the EU registration process for veterinary medicinal products and feed additives to natural substances**. Currently, the specific characteristics of natural substances are hardly reconcilable with the data requirements, because the registration process is more adapted to synthetic substances. As a result, alternatives are often blocked for years at the registration stage.
- **Take a clear decision at the Commission's level on the regulatory status of some alternatives**: are they considered as feed materials, feed additives, or veterinary medicinal products?
- **Involve vets and feed mills when developing alternatives in livestock production**, in order to facilitate their adoption. This is key for livestock production, where farmers rely directly on other actors to cure or feed their animals. Medicines must be prescribed by a veterinarian (farmers are not allowed to provide medication themselves) and feed mills decide on the level of vitamins in their premix.
- **Change the business model of vets** to make it compatible with the reduction of antibiotics and anthelmintics.
- **Provide financial and technical support to farmers**, as the adoption of alternatives to anthelmintics and antibiotics is likely to require additional efforts by farmers due to changes in production practices. Member States should explore the possibilities offered by the CAP.
- **Strengthen advisory structures** (both in terms of human and financial resources) to develop preventive approaches in animal health.

Contribution to the EU Green Deal

A change is needed in the way alternatives are perceived, especially for antibiotics and anthelmintics. It seems reasonable to assume that the alternatives based on natural substances will not be as efficient as their synthetic counterparts. They should therefore be considered as a tool in a systemic approach to animal health, where immune response and nutrition will help achieve control of diseases and parasites. This is already the basis of organic farming, but this shift in animal health approach is also needed in conventional farming. Ultimately, this would contribute to the Farm-to-Fork target of the reduction of the sales of antimicrobials by 50% by 2030.

Link to the roadmap:

https://relacs-project.eu/wp-content/uploads/2022/04/RELACS_D7.6_European_roadmap_Livestock_202204_final.pdf

About this factsheet and RELACS

Publisher:

Publisher:

IFOAM Organics Europe

Rue du Commerce 124, BE-1000 Brussels

info@organiceurope.bio, <https://www.organiceurope.bio/>

Author: Mathilde Calmels

Editor: Bram Moeskops

RELACS: 'Replacement of Contentious Inputs in Organic Farming Systems' (RELACS) builds on the results of previous research projects and takes far-advanced solutions forward. As a system approach to sustainable agriculture, organic farming aims to effectively manage ecological processes whilst lowering dependence on off-farm inputs. The RELACS partners will evaluate solutions to further reduce the use of external inputs and, if needed, develop and adopt cost-efficient and environmentally safe tools and technologies.

Project website: www.relacs-project.eu

Social media: Facebook ([RELACSeu](https://www.facebook.com/RELACSeu)) & Twitter ([@RELACSeu](https://twitter.com/RELACSeu))

© 2022



RELACS has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 773431. The information contained in this communication only reflects the author's view.