

The Future of Animal Feed: Lay Summary

The feed-food competition for environmental and economic resources raises increasing concerns about the production and supply of protein for the global livestock sector.

Risks to food-security and approaching deadlines for global sustainable development, means exploring the potential for alternative protein feeds is imperative. However, as the use of alternative feeds for livestock production is still at its infancy, it is critical that potential direct or indirect food safety risks are evaluated before implementation at commercial scales. This Rapid Evidence Assessment (REA) offers a lens that focuses on the potential opportunities and threats of such alternatives for the sustainability and food safety of the global livestock sector.

Four potential alternative protein sources for livestock feeds are identified and evaluated through this REA:

- genetically modified / engineered protein crops and alternative cultivation methods
- cellular agriculture
- former foods, food waste and industry by-products and waste streams
- animal by-products and insects

Through this analysis, a strategic policy roadmap and research agenda are synthesised to facilitate higher-level policy making, supporting local solutions for global sustainable development and a more food-secure future. The four broad directions for policy making and research the REA proposes are:

- decoupling protein production from fossil fuel
- developing sustainable economic strategies for alternative proteins at a subnational level
- supporting circular livestock feed solutions
- further enhancing the feed and food regulatory system