



FEFAC
Experts in Animal Nutrition

Catalogue of circular feed measures

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EU FEED CIRCULARITY CATALOGUE
EXISTING LEGAL RESTRICTIONS TO ENHANCED
ANIMAL FEED CIRCULARITY



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EU CIRCULAR FEED PLATFORM

- Evaluate the **potential for increased** feed circularity
- Stimulate the **“circular feed” culture** within the bioeconomy chain
- Convince the EU legislator of the interest to invest (time and resources) for the launch of a **Circular Feed Roadmap** including
 - (Review of) Risk Assessment (by EFSA)
 - Knowledge gaps
 - Review of legal requirements

35th Sta-DG-ER meeting

A favorable EU working agenda

- Bioeconomy strategy
- Competitiveness compass
- Vision for Agriculture
- Circular economy act
- Heads of Agencies sustainability catalogue
(<https://www.headsofagencies.eu/publications.html>)
- Letter from Norwegian authorities to EC on review of the feed ban



Towards sustainable food systems

Reflections by Heads of Food Safety Agencies

September 2023



Resources **NOT** available

- Types of material
 - Material prohibited for feed use by law (e.g. food waste, Annex III of R767/2009, ruminants PAPs)
 - Material above standards set based on feed/food safety (mycotoxins, THC, other contaminants)
 - Material non compliant with feed (or food) law but safe (pesticides MRLs, rDNA in feed additives, etc).
- Why could it be reviewed?
 - Knowledge
 - Experience
 - Technological developments (e.g. detoxification, use of intermediate organisms (insects, micro-organisms etc.)
 - Example of other countries

Disclaimer

- *The content of this report is the result of the joint work from 8 European organisations operating in the circular feed chain and is not an expression of an official position from individual associations regarding one or the other measure/case study. In this respect, it does not in any way preclude individual associations to promote their sustainability agenda according to the specificities, circumstances and priorities of the association. As such, this report should be seen as a non-exhaustive list of considerations, principles and ideas suggested as a point of entry for further discussions within the stakeholders' community and with national and EU authorities.*
- *This is not a call for deregulation but to review the fitness of the regulation.*

13 case studies linked to ABP or Feed ban legislation

- CS 1: Use of catering waste for feeding intermediate organisms
- CS 2: Use of meat & fish containing former foodstuffs for feeding insects
- CS 3: Allowing intra-species recycling
- CS 4: Use of ruminant PAP in non-ruminant feed
- CS 5: Cat 2 MBM (method 1) for export as feed to third countries
- CS 6: Use of former foodstuffs containing ruminant gelatine in feed for ruminants
- CS 7: Use of fishmeal in feed intended to ruminants
- CS 8: Inclusion of processed proteins derived from edible gelatine, collagen and animal fat production under the definition of PAP
- CS 9: Operational thresholds for controls of compliance with “feed ban” provisions
- CS 10: Maintaining Category 3 status for ABP containing technically removable foreign bodies
- CS 11: Expand the definition of fish meal and fish oil
- CS 12: Use in feeds of purified mineral nutrients from sewage or manure
- CS 13: Use of dicalcium phosphate from bones in ruminant feed

1. Use of catering waste for feeding “intermediate organisms”

- Legal situation: ban on use in feed for food producing animals by art. 11(1)(b) of R1069/2009 (ABP regulation)
- Origin of the restrictions: Ban on use as feed of catering waste (swill feeding) in 2002 in the wake of the FMD crisis
- Destination of non permitted products: Processing and use in accordance with R142/2011.
- Potential impact for increasing circularity: high (depend on conditions)
- Time needed to lift the restriction: **long** (ordinary procedure, EFSA assessment)
- Time for translation into practical increase of circularity: **medium**

2. Use of former foostuffs containing meat and / or fish for feeding insects

- Legal situation: legal ban via Regulation (EU) No 142/2011
 - Insects reared within the EU fall within the category of '**farmed animals**' pursuant **Article 3(6) of Regulation (EC) No 1069/2009** subject to feed ban.
 - Notably, **Annex X, Chapter II, Section 10 of Regulation (EU) No 142/2011** excludes meat or fish containing former foodstuffs as feed for food producing animals
- Origin of the restrictions: Restriction under the EU animal by-products legislation for all farmed animals as part of the feed ban since 2001
- Destination of non permitted products: Fur animals/pets/non-feed-food
- Potential impact for increasing circularity: Medium
- Time needed to lift the restriction: **Medium** (Implementing act, EFSA assessment)
- Time for translation into practical increase of circularity: **short**

3. Authorisation of intra-species re-use of animal proteins in feed

- Legal situation: No feeding from pig to pig and poultry to poultry and farmed fish to farmed fish (same species), zero tolerance
- Origin of the restrictions: ABP-R1069/2009 – article 11. Prohibited since 2002 (R1774/2002)
- Destination of non permitted products: Petfood, fertiliser and export
- Potential impact for increasing circularity: high
- Time needed to lift the restriction: **long** (ordinary procedure, EFSA assessment)
- Time for translation into practical increase of circularity: **short**

4. Use of ruminant PAP in non-ruminant feed

- Legal situation: Ban on ruminant PAP in farmed animals
- Origin of the restrictions: TSE Reg. 999/2001 – article 7+Annex IV - Total feed ban in 2001
- Destination of non permitted products: Petfood, fertiliser and export
- Potential impact for increasing circularity: high
- Time needed to lift the restriction: **long** (Implementing act, EFSA assessment)
- Time for translation into practical increase of circularity: **medium**

6. Use of former foodstuffs containing ruminant gelatine in feed for ruminants

- Legal situation:
 - Can only be used in feed for non-ruminant animals
 - Regulation (EC) No 999/2001: The prohibition for feeding ruminants mentioned in art. 7 par 1 concerns proteins from any animal species. The derogation granted in Annex IV Chapter II concerns only gelatine from non-ruminants
- Origin of the restrictions: Outbreak of BSE, resulting in the EU total ban on the use of processed animal proteins in feed for farmed animals intended for human consumption in 2001.
- Destination of non permitted products: Petfood, biogas, feed for non-ruminants
- Potential impact for increasing circularity: low (the quantities of product that could be recuperated would not be very high)
- Time needed to lift the restriction: **long** (Implementing act, EFSA opinion, ruminant into ruminant, meaning highly sensitive)
- Time for translation into practical increase of circularity: **short**

9. Operational thresholds for controls of compliance with “feed ban” provisions

- Legal situation:
 - Ban on use of products of ruminant origin (with exception) in feed for food producing animals by art. 7 of R999/2001 (TSE regulation) / ban on intra-species use of PAPs by art 11 of R1069/2009 (ABP Regulation)
 - No tolerance for Intra-Species recycling, leading to legal uncertainty for users and only a very limited number of operators having taken the risk of a non-compliance
- Origin of the restrictions: ABP-Regulation 1069/2009 and SOP for Species detection
- Destination of non permitted products: Petfood, fertiliser and export
- Potential impact for increasing circularity: High (depend on conditions)
- Time needed to lift the restriction: **Medium** (delegated act, EFSA assessment)
- Time for translation into practical increase of circularity: **short**

10. Maintaining Category 3 status for ABP containing technically removable foreign bodies

- Legal situation: Classification as category 2 for animal by-products that have been declared unfit for human consumption due to the presence of foreign bodies by art.9(d) of R1069/2009 (ABP regulation)
- Origin of the restrictions: A combination of historic food safety concerns and public health protection principles
- Destination of non permitted products: Most likely biogas as the best next option
- Why could it be reviewed: If technological processing enables the safe removal of that foreign body (e.g. using magnets to extract metal components) then the material (i.e. former foodstuffs) can still be perfectly fit for animal feed
- Potential impact for increasing circularity: low (it mostly concerns providing legal certainty to current manufacturing processes)
- Time needed to lift the restriction: **long** (ordinary procedure)
- Time for translation into practical increase of circularity: **short**

12. Use in feed of purified mineral nutrients from incineration ashes

- Legal situation: Ban on use of urban waste waters, irrespective of any form of treatment”, ban on use of manure as feed
- Origin of the restrictions: Feed Regulation 767/2009 Annex III, ABP categorization as Cat 2
- Destination of non permitted products: half of the urban waste waters goes to incineration, corresponding to 100,000 t of phosphorous not used in feed, lost. Manure used as fertiliser
- Circularity potential: Very High
- Potential impact for increasing circularity: 100,000 t (if not used in feed, objective is use as fertiliser)
- **Time needed to lift the restriction: long**
 - Need to modify R 767/2009 and ABP Regulation
 - Need for EFSA Opinion on specific processes
- **Time for translation into practical increase of circularity: medium** (industry processes exist)

4 Case studies linked to other restrictions

- CS 14: Biomass grown in or fertilised by waste
- CS 15: Risk-based management of contaminants overload
- CS 16: Maintaining Footnote 1 of Regulation (EC) No 396/2005
- CS 17: Use of microbial biomass from genetically modified micro-organisms

14. Biomass grown in or fertilised by waste

- Legal situation: Ban on use as feed of waste obtained from waste water treatment whatever the process performed (annex III, part I par. 5 of R767/2009). Status of biomass grown in or with wastewaters is unclear.
- Origin of the restrictions: Initially, ban on sludge from sewage plants treating waste water (Decision 91/516), further clarified as any waste water treatment by Decision 2004/217
- Destination of non permitted products: Need to define what types of biomass, from what waste liquors (municipal wastewater, digestates, aquaculture sludge ...), after what processing, to ensure safety (contaminants, pathogens)
- Potential impact for increasing circularity: medium (if not used in feed, objective is use in fertilizer)
- Time needed to lift the restriction: **medium** (variable for different products/routes)
 - Interpretation of Regulation by COM to authorise products after certain types of processing ?
 - Need to modify Regulation annex III (implementing act or delegated act?)
 - Need for EFSA Opinion ?
- Time for translation into practical increase of circularity: **medium**

15. Risk based management of contaminants overload

- Legal situation:
 - Max limits set on feed materials based on 95 percentile, i.e. 5% of resources excluded for feed use per contaminant. If several contaminants, potentially more.
 - Non-compliant feed materials may be detoxified (if method exists and is authorized) – but potentially costly
 - Dilution currently prohibited by article 5 of Directive 2002/32 as regards undesirable substances and products and by article 19 of R396/2005 for pesticide residues
- Origin of the restrictions: Dilution prohibited in 1999 in the wake of dioxin crisis (before, dilution permitted if processed by approved operators).
- Destination of non permitted products: Non-food / Non-feed
- Why could it be reviewed: technical developments, may be limited to “natural contaminants” or to contaminants with no carry-over to animal products
- Potential impact for increasing circularity: medium (depends on conditions)
- Time needed to lift the restriction: **long** (ordinary procedure, EFSA assessment)
- Time for translation into practical increase of circularity: **medium** (time to approved dilution establishment)

17. Use of biomass from genetically modified micro-organisms used for the production of feed additives by fermentation

- Legal situation:
 - Regulation (EC) No 1829/2003 provides for an authorization as food or feed of biomass of genetically modified micro-organisms used by the fermentation industry
 - The safety of GMMOs is evaluated as regards possible production of biotoxins that may affect the safety of the fermentation products (e.g. feed additives) but not as biomass per se
 - Several applications for authorization underwent non-conclusive risk assessment.
- Origin of the restrictions: Same restriction as for any genetically modified feed.
- Destination of non permitted products: Export to TC / Discard
- Why could it be reviewed: The methodology for the risk assessment and in particular the relevance of the worst-case scenarios as regards the inclusion rates of microbial biomass in feed could be reconsidered (ref: report Pinotti et al. on feasibility of a feed consumption database by EFSA)
- Potential impact for increasing circularity: medium (depends on conditions)
- Time needed to lift the restriction: **medium** (upgrade of EFSA risk assessment approach)
- Time for translation into practical increase of circularity: **short**

Overview of case studies and volumes at stake

10 – 100 kT

500 – 1,000 kT

>5,000 kT

100 – 500 kT

1,000 – 5,000 kT

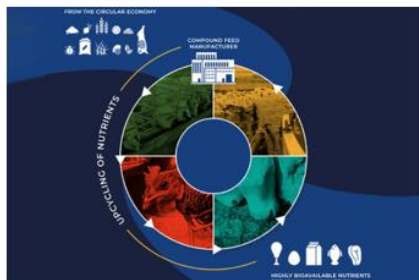
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CS 6: Use of former foodstuffs containing ruminant gelatine in feed for ruminants	CS 15: Risk-based management of contaminants overload
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In short...

- **Increased circularity in feed** is key to a more sustainable way forward for livestock production
- The time is right to debate **potential changes to the EU regulatory framework** for increased circularity, while maintaining safety
- Time needed to amend the legislation depends on the **nature of the legal act to amend**, the time for an **EFSA risk assessment** (if needed), the **political will**
- Time needed to reuse once the legislation is amended depends on the **availability and “upscalability” of technologies**, legal **technical requirements** and social acceptance
- **Safety remains a prerequisite**
- **Need for a circular feed roadmap**



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