



Towards sustainable food systems

Reflections by Heads of Food Safety Agencies

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It is important to note that this document does not replace the discussion of the aspects of sustainability with the Member States in the relevant Commission working and expert groups.

It is important to note also that the content of this paper is not supported by all HoA members in its entirety.

The considerations in the catalogue must be seen as a deliverance of the HoA WG Sustainability and is not an expression of an official HoA Member State position. In this respect, the catalogue does not in any way preclude HoA Members to push the sustainability agenda according to the specificities, circumstances and priorities at national level. As such, the catalogue should be seen as the deliverance of a non-exhaustive list of considerations, principles and ideas suggested as a point of entry for further discussions on the sustainability agenda.”



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Introduction

The transition towards more sustainable food systems is on all our plates. The Heads of Food Safety Agencies (HoA) has given the Working Group Sustainability (WG Sustainability) a mandate to engage in important discussions on sustainability reflecting the European Commission (EC)'s ambitions set forward in the Green Deal and Farm2Fork-strategy. The aim is to share best practices between Members of HoA and to share the work of the WG and HoA with the EC in order to facilitate discussions on sustainability through the EC governance structures.

The product in hand is a catalogue showcasing the work and discussions which have taken place in the WG Sustainability regarding food losses and food waste, sustainable feed production and the upcoming legislative proposal for a framework for sustainable food systems, which is envisaged later this year. Thus, the considerations and principles in the catalogue reflect the work of three sub-groups on these particular issues allowing experts on specific EU-legislation to discuss in depth the sustainability issues relating to the remit of their expertise. The WG Sustainability acknowledges and underlines that the catalogue is work in progress and that other issues could have been equally important to address. As a result of the dynamics in WG Sustainability, emphasis is put on sustainable feed production and not food production in the catalogue. It should be noted that the potential of feed in the sustainable transition of food systems is substantial and therefore, those considerations are important to address. The catalogue could be further developed over time, taking on board new themes and new challenges, which will arise. During the drafting phase of the document, WG Sustainability touched upon equally important issues such as sustainable food production and nutrition, and envisages these issues to be further dealt with. In accordance with the mandate of the WG Sustainability the catalogue will give food for thought both within HoA and for the EC.

WG Sustainability trusts that the HoA will continue to discuss sustainability amongst Members and answer the EC's ambitious agenda stemming from the Green Deal and Farm2Fork-Strategy. Fostering further strategic discussions in the HoA on sustainability and to continuously share issues within HoA's remit with EC will help to push the sustainability agenda forward.

General principles for a legislative framework

The upcoming legislative framework for sustainable food systems is a cornerstone in enabling all actors in the food chain to promote and deliver on more sustainable food systems. As such, it is important to discuss the principles, the definitions and scope of the framework.

According to the mandate from the Heads of Food Agencies (HoA) the Working Group on Sustainability has embarked upon the discussions on principles for the legislative framework. The principles and ideas are listed in annex II.

Sustainability is already a part of the EU-legislation. It is acknowledged that sustainable production methods are already taking place and in this respect the sustainability concept is not new.

However, the concept of sustainability being at the core of EU-legislation is new and not easily dealt with. Risk managers will also face challenges when working with sustainability in this new way. In order to be prepared for further discussions on this complex issue the Working Group presents in this catalogue principles and ideas about how to deal with sustainability in the legal framework.

The principles and ideas are falling in four categories; (1) “general principles”, (2) “food, safety and sustainability relationship”, (3) “monitoring and assessment” and (4) “food systems governance” paving the way to broad discussions involving different aspects. Other aspects could be included as work progresses, and the table of principles is in no way exhaustive.

The discussions on principles and ideas reflect two important notions:

First, existing principles in EU-legislation should be emphasized, reiterated and thus not forgotten – but also revisited in a sustainability perspective. Acknowledging both to keep what works already and to revisit the current understanding of legislation to support the sustainability aspect.

Second, having focused on the food safety agenda since before 2000 it could be valuable to introduce and include new ideas to the existing feed and food narrative to support the transition towards more sustainable food systems.

The WG Sustainability suggests for further discussions within the HoA and with EC on the overall approach to the legislative work delivering more sustainable food systems for the future. In this respect, the WG Sustainability welcomes the ambition of the EC to have more systemic approach to the food system and strongly encourage the EC to engage with the HoA as a group of experienced senior decision-makers and implementers of EU and national policies in the Union. WG Sustainability has identified that there are opportunities to improve the current legal framework to underpin the sustainability goals of Farm2Fork however, this would require amendments to some of the existing legal instruments.

Therefore, the aim is to have a clear legislative framework operational to the tasks of the Heads of Food Safety Agencies to implement and enforce in a harmonised way across the EU. Thus, to protect consumers – their health and their interests – and to support the Industry in EU in thriving and developing in a new legislative environment.



Overview of the Considerations

According to the mandate from HoA, the WG Sustainability presents a series of considerations, that support possible ways to increase sustainability in the food system. The considerations are listed in a table overview below and elaborated in more depth in terms of context, e.g. identified barriers in the annex I.

The considerations in the catalogue include both legislative and non-legislative measures. It has proven a difficult exercise to prioritise among the considerations in accordance with their potential to increase sustainability in the food system as the differences in scope and means make the considerations somewhat incomparable. Furthermore, the WG Sustainability does not have the means or expertise to perform full scale impact assessments in this respect.

Acknowledging these factors, the WG Sustainability has nevertheless embarked upon discussions on the need to prioritize work on the sustainability agenda. Engagement with the EC would be important in the context of prioritization to ensure greater alignment as well as increasing the opportunity to achieve the ambitious goals of the Farm2Fork.

The discussions on prioritization in the WG Sustainability have primarily revolved around two key elements: the envisaged or expected potential **impact** for increasing sustainability in the food system as well as the **effort** (and time) relating to the implementation of the proposed actions.

The table below primarily reflects the envisaged time aspect of deliverance of considerations and places the delivery of short-term measures at the top of the list. At the bottom of the list are placed those considerations which have an envisaged longer-term deliverance. It should be noted that these longer-term considerations could be more significant in achieving greater sustainability of food systems even though they would require more time to deliver.

The WG has also discussed criteria for prioritisation including issues such as costs, resources, complexity, effectiveness and contribution to the Farm2Fork-Strategy. The WG propose that these elements are reflected on in further discussions on sustainability both within HoA and with EC, in order to best deliver on the sustainability strategy.



Table of considerations

Subgroup: Ensuring sustainable food production with particular focus on feed.

Reference number	Consideration	Justification	Initiator	Timeframe	F2F
	E.g. Proposed action / specific legislative amendments	E.g. Why this change / context	E.g. COM/ MS/ EFSA/FBO	E.g. Short term/Long term. (Effort/impact)	Reference to F2F
1. Authorization of feed additives e.g.					Initiative no. 8
Support quick and smoother authorization process of innovative feed additives without compromising feed safety.					
1.1	Consider <u>permanent authorisations</u> for feed additives or increase authorisation periods from the current 10-year renewals.	Use of limited resources for innovation instead of reauthorisations	COM	Short term Low effort High impact	
1.2	Consider the introduction of an easy-to-understand, harmonised and flexible <u>claims system</u> .	To promote sustainability via targeted claims	COM	Short term Medium effort Medium impact	
1.3	More <u>holder specific authorisations</u> within EU.	To support self-sufficiency and access to feed additives within EU. (acceptable return of investment)	COM	Short term Low effort High impact	
1.4	Consideration should be given to the automatic <u>extrapolation</u> of additive authorisations <u>to minor species</u> .	Availability of sustainability feed additives for all animal groups	COM	Short term Medium effort Medium impact	
1.5	Authorisation <u>requirements</u> should not be too demanding/ <u>be loosened</u> unless it improves safety.	To use resources in a risk-based way and secure feed additive production in the EU	COM	Short term High effort Medium impact	
1.6	EFSA guidance document on <u>endpoints</u>	To support authorisation of	COM	Medium term (ongoing)	



	for applicants applying for authorisation of innovative feed additives.	innovative feed additives		Medium effort (under way) High impact	
1.7	Consider to provide <u>option</u> - e.g. holder specific authorisations - where there <u>no application submitted</u> for necessary feed additives.	To support access to sustainability feed additives	COM	Medium term High effort High impact	
1.8	Request <u>EFSA</u> to provide written or oral <u>assistance to the applicant</u> when pre-notifying their experiment.	To reduce unnecessary use of resources	COM	Medium term (on-going) Medium effort Medium impact	
1.9	Request EURL or JRC to provide harmonised comprehensive EU- <u>methods of analysis, especially for enzymes</u> (xylanase, glucanase).	Supporting export	COM EFSA EURL	Long term High effort Low impact	
2. Methane emission reduction To progress the reduction of methane emissions through feed.					No initiative, but mentioned in F2F
2.1	Closer co-operation between SCoPAFF (Animal Nutrition) and the EU-Expert Group regarding the national emission inventories.	To ensure best use of available knowledge and consistency in calculating emissions reductions	COM	Short Term Low effort Medium impact	
2.2	Establish an EU-forum to examine methane reduction, primarily in relation to feed.	To disseminate and discuss latest research and inventory strategies across all stakeholders	COM	Medium term Low effort Medium impact	
2.3	Consider labelling options for supporting methane	To speed up the process and	COM	Medium term	



	reduction from feed materials (Also see Point 5 'Sustainability Claims').	improve harmonisation		Medium effort Medium impact	
3. New protein resources, support of circular economy and reduction of “waste”					No initiative
Reduce use of natural resources and dependency on critical feed materials (soya, deforestation), and reduce “waste”.					
3.1	Place sustainability discussions on the EU-meeting agendas.	To improve communication and harmonisation	COM	Short Term Low effort High impact	
3.2	An EU-guidance to clarify the situation of production of microorganisms on substrates such as manure, fish sludge, wastewater etc.	Create a common understanding of the regulations	COM	Short/ Medium term Medium effort Medium impact	
3.3	Focus more on the safety of the final product rather than the materials of origin, e.g. in the context of circulation of phosphorus.	To increase reuse of (scarce) nutritional resources	COM	Medium term High effort High impact	
3.4	Risk assessment of use of catering waste as feed under certain conditions.	Increase the use of nutritional sources is assessed to be safe	EFSA	Medium/ Long term High effort Medium impact	
3.5	Expand the definition of fish meal and fish oil to include all wild harvested aquatic invertebrates.	Allow the use of new sustainable feed sources	COM	Medium term Low effort Low impact	
3.6	Relaxation of feed ban where risk assessment can demonstrate safety.				
	a. Revise annex IV in the TSE-regulation to make it more user friendly.	Easier for establishments to comply with the regulations	COM	Short term Low effort Low impact	
	b. Risk asses unintended cross-contamination	Increase the use of nutritional sources is assessed to be safe	COM based on EFSA-report	Medium term Medium effort High impact	



	due to use of the same production line for pig- and poultry feed (intra-species recycling).				
	c. Further development of quantitative analytical methods for PAP to make it possible to quantify level of cross-contamination.	To increase reuse of (scarce) nutritional resources	EURL	Medium term Medium effort High impact	
	d. Allow pig and poultry PAP in substrate for feed for insects.	To increase reuse of (scarce) nutritional resources	COM	Short term Low effort Low impact	
	e. Replace specific provisions in TSE-regulation with FeBO own checks.	Reduce administrative burden for authority	COM	Medium term Medium effort Low impact	
	f. Risk asses the processing method for pig protein in ABP regulation to make it more valuable as feed.	Increase the nutritional quality of pig PAP	COM based on EFSA-report	Medium term Medium effort Medium impact	
3.7	g. Relax feed legislation to allow alternative non-competitive feed for insects.	To increase reuse of (scarce) nutritional resources	COM based on EFSA-report	Long term	
3.8	Promote research that would facilitate the removal of legislative barriers to recycling animal protein.	To increase reuse of (scarce) nutritional resources	COM, EFSA and Horizon	Long term (short term to start the research)	
4. Feed to reduce anti-microbial resistance (AMR): Probiotics and fermented feed Agriculture and aquaculture shall reduce use of antimicrobials by 50 % by 2030.					No initiative,



					but AMR mentioned in F2F
4.1	Clarify and discuss the legal situation in Regulation (EC) 1831/2003 concerning the terms “probiotics” and “probiotic effect” in relation to the functional group 4b “gut flora stabilizers”.	Harmonisation for industry and for official control bodies	COM	Medium term Low effort Medium impact	
4.2	Development of a specific technical guideline under Regulation (EC) 429/2008 clarifying the coherence between effect (and thereby claims) and endpoints for probiotics and physiological condition stabilisers.	Harmonisation for industry and for official control bodies	EFSA initiated by COM	Medium term Medium effort High impact	
4.3	Development of an EU guidance document on claims in relation to prebiotics, synbiotics and postbiotics based on article 13 of Regulation 767/2009.	Harmonisation for industry and for official control bodies	EFSA initiated by COM	Medium term Medium effort Medium impact	
4.4	Development of clear harmonised requirements /legal rules in Regulation (EU) 68/2013 for fermented feed materials, fermented feed products or microorganisms for safe fermented feed use including clarifying legal situation (status) of	Harmonisation for industry and for official control bodies	COM	Medium term Medium effort Medium impact	



	microorganisms used for their production.				
4.5	Support (new) technology for bulk fermentation of feed products, e.g. protein-rich biomass, for example via the European Horizon research program, and the development of probiotics.	Harmonisation for industry and for official control bodies	COM	Medium term Medium effort Medium impact	
5. Sustainability claims (Industry finds it) important to inform buyers about effects in feed that increases sustainability in farming.					No initiative, but mentioned in F2F
5.1	Development of a guidance document on sustainability claims to clarify the different types of claims and the methodology of evaluating the sustainability claims.		COM	Short term Medium effort Medium impact	
5.2	Establish a list of authorised sustainability claims that can be used by feed business operators under defined conditions, similar to the list of dietetic feed claims, in order to harmonise the sustainability claims at European level.		COM	Medium term High effort Medium impact	
5.3	Revision of article 13 and/or 22 of Regulation (EC) No 767/2009 to ensure that all sustainability claims		COM	Long term Low effort Medium impact	



	have to be substantiated.				
6. Summary of barriers in feed legislation (conclusion of the point 1-5)					
6.1	Refit of feed additive regulation 1831/2003 among other to reduce number of re-authorization of feed additives and make extrapolation of minor species possible in more situation (1831/2003) (= considerations 1.1, 1.2, 1.4, 1.6 and 1.7).	To use resources in a way that supports sustainability without compromising safety	COM	Short term	
6.2	Amend TSE-regulation 999/2001 that forbid use of pig and poultry PAP as substrate feed for insects (= consideration 3.4.d).	To increase reuse of (scarce) nutritional resources	COM	Short term	
6.3	Clear legal rules on the use of the term 'probiotics', 'symbiotics' and 'postbiotics' (= consideration 4.1).	Harmonisation for industry and CA's	COM	Short term	
6.4	Clear legal rules and/or guidance on which basis microorganisms can be used for fermentation of feed materials, about inactivation etc. (= consideration 4.3).	Clarity for industry and CA's	COM and EFSA	Short term	
6.5	If safe, change of articles in TSE-regulation 999/2001 that forbids same production lines for pigs and poultry. Requires EFSA assessment. (= consideration 3.4.b).	Increase the use of nutritional sources that are assessed to be safe	COM and EFSA	Medium term	
6.6	If safe, align the processing method for pig (PAP) as poultry PAP.	Increase the nutritional quality of pig PAP	COM and EFSA	Medium term	



	Change ABP-regulation. Requires EFSA assessment. (= consideration 3.4.f).				
6.7	Expand the definition of fish meal and fish oil to include all wild harvested aquatic invertebrates (= consideration 3.7).	Allow the use of new sustainable feed sources	COM	Medium term	
6.8	Revision of article 13 and/or 22 of Regulation (EC) No 767/2009 to ensure that all sustainability claims have to be substantiated. (= considerations 2.3, 5.1).	Clarity for industry and CA's	COM	Medium term	
6.9	Investigate possibility to implement the safe use of pure and highly processed prohibited substances for feed - requires amendment of the ABP-TSE- and the marketing-regulation (annex III-forbidden substances) (= consideration 3.1.).	To increase sustainability	COM and EFSA	Long term (short term to start the research)	
6.10	Relax feed legislation to allow alternative non-competitive feed for insects (= consideration 3.3).	To increase reuse of (scarce) nutritional resources	COM and EFSA	Long term	



Subgroup: Reducing Food loss and food waste.

Reference number	Consideration	Justification	Initiator	Prospects	F2F
	E.g. Proposed action / specific legislative amendments	E.g. Why this change / context	E.g. COM/MS / EFSA/FBO	E.g. Short term/Long term. (Effort/impact)	Reference to F2F
1	Guidance on the possibility of processing food when food safety criteria have been exceeded.	Lack of awareness of this option by manufacturers and lack of a specific Guide to Good Practice	COM	Short term, easily achieved	No initiative, but mentioned in F2F
2	Intelligent/active packaging to improve the durability of food, and better inform the consumer (e.g. time-temperature integrators).	Innovative way to reduce food waste especially if used effectively	MS	Short term, difficult	No initiative, but mentioned in F2F
3	Possible actions of consumers and food handlers in relation to food waste reduction.	Urgent need for education and training in reducing food waste	MS	Medium term, easily achieved	No initiative, but mentioned in F2F
4	Making 'end of shelf-life foods' more attractive to consumers.	Retail level awareness and specific queries	MS/COM	Medium term, relatively easy	No initiative, but mentioned in F2F
5	Import legislation: reducing food waste at BCP.	How much waste-collect data, prevent errors through guidance	COM	Long term, difficult	No initiative, but mentioned in F2F
6	New technology specific questions.	Specific outstanding issues need to be clarified	EFSA, COM WGs	Long term, difficult	No initiative, but mentioned in F2F



Annex I

1. The potential of feed additives to pave the way for a sustainable agriculture

Consideration

The focus of EU-feed legislation needs to encompass “production of enough food” and “production in a sustainable manner”. Feed additives are a specific type of feed requiring EU-authorisation unlike feed materials. Feed additives have considerable potential to support sustainable animal production. It could therefore be considered to increase the incentive to apply for authorisation of innovative feed additives. This can be done through relaxation of the authorisation burden and clarification of the rules for innovative feed additives without compromising safety.

Issues / barriers for sustainability

Economic incentives for EU-companies to apply for authorisation are insufficient or in some cases absent. Many feed additives in the EU are non-holder specific and can be produced and marketed by any company. For these authorisations, EU-companies bear the costs to apply for authorisation but get no economical return by their investment. A lot of the nutritional additives used in the EU are produced by third country companies and imported into the EU. Safety and resilience in animal production in the EU are at risk of being compromised by inadequate self-sufficiency within the EU. In addition, the current system does not encourage application for authorisation for all necessary types of feed additives, for all relevant animal species.

In the feed area, EU requires renewal of authorisations every 10 years. This administrative burden is in most cases not necessary in relation to safety and restricts resources from the development of new innovative feed additives. To speed up authorisation of innovative feed additives, clarification of rules and timely guidance on endpoints would be beneficial. Rules on sustainability claims should also be introduced, to reduce the administrative burden on industry and CAs.

Context

In order to fulfil the objectives of the Green Deal and Farm2Fork strategy, to support sustainable farming, enhance animal welfare, decrease environmental footprint and to tackle the evolving threat of antimicrobial resistance (AMR), the EU ought to be receptive to innovation. In addition, clarification of the rules for claims and simplification of the application process for feed additive authorisation is required. The revision of the feed additive regulation 1831/2003, hopefully re-starting in 2023, could help to achieve these objectives.

Proposed actions / future steps

The Commission is invited to consider the following areas in relation to the refit of Regulation (EC) No. 1831/2003 on additives for use in animal nutrition:

1. *Consider permanent authorisations for feed additives or increase authorisation periods from the current 10-year renewals.*

In the food area and partly in the veterinary medicine area, permanent authorisations exist.

Permanent or extended authorisations could be permitted for most additives, with the exception of



coccidiostats and histomonostats. It would also be important to allow extension of the re-use of data in the authorisation process.

2. *Consider the introduction of an easy-to-understand, harmonised and flexible claims system.*
Harmonisation of claims in the context of innovative feed additives (mode of action) is important. A definition of 'sustainability', will ensure that the industry and Competent Authorities have a common view on what sustainability means. A claim system could be considered, where the applicant suggests the desired wording of claims. It is considered that new endpoints and new sustainability words are far more important for innovation than new groups of additives. The existing two "open" functional groups in the legislation, 1(o) and 4(d), provide sufficient scope for innovation.
3. *Consider the development of EFSA guidance document on endpoints to applicants applying for authorisation of innovative feed additives.*
An EFSA-guide with discussions of and suggestions for endpoints for innovative feed additives could be provided. This could provide incentives for applicants and support quicker authorisation of these additives.
4. *Consider to encourage a higher degree of self-sufficiency of feed additives within EU.*
This would secure the supply and ensure the safety and legality of the additives. In this context consideration could be given to holder specific authorisations as an incentive for industry.
5. *Consideration can be given to providing options where there is no application submitted for necessary feed additives.*
The industry must define which non-authorised feed additives are really necessary in animal production, but with no incentive to apply. Holder specific authorisations might help to solve the problem.
6. *Consideration should be given to the automatic extrapolation of additive authorisations to minor species.*
It is important that there are additives authorised also for minor species. Therefore, it is suggested that EU lays down in the rules, that extrapolation is always applied where possible, regardless of whether it is requested in the application. How to do this should be discussed further. The HoA finds that rules for extrapolation to other animal species should be simplified.
7. *Consider authorisation requirements not to be too restrictive unless it improves safety.*
An example of too strict approval requirements is the suggested introduction of a very sensitive analytical method for rDNA from the production organism, which does not improve safety as such, but seems to severely compromise the EU-biotech industry's production of feed additives produced by fermentation like enzymes, amino acids, certain vitamins and organic acids. These are all important additives for sustainable feed production.
8. *Consider to request EFSA to increase the speed of authorisation and to provide the applicants with written guidance or oral assistance from EFSA when pre-notifying their experiments.*
Encourage EFSA to inform applicants about the specific basis for the assessment and to give guidance on missing data before EFSA opinions are finalised. This is important to ensure applicants have the chance to deliver adequate data to avoid inconclusive EFSA opinions.



9. Consider to request EURL to provide additional comprehensive EU-methods of analysis, especially for enzymes (*xylanase, glucanase*).

With current system with the applicant-specific methods it is not possible for the competent authorities to perform official controls in certain cases, such as verification of min/max limits or for export certificate purposes. A harmonisation of the procedures of the EURL/NRL network and the applicants would be desirable.



2. Methane Emission Reduction through Feed

Consideration

In line with the EU strategies - e.g. the EU Green Deal, Methane Strategy Report and Farm2Fork strategy - a reduction of methane emissions globally by 50% before 2050 is necessary to mitigate temperature change. Therefore, new methane reducing feed ingredients and feeding concepts for ruminants must be identified, along with a research-based description of their potential, identified problems and side effects in relation to their use.

Issues / Barriers for sustainability:

- Food systems account for nearly one-third of global greenhouse gases (GHG) emissions and consume large amounts of natural resources. There are 1.7 billion cattle and 2.2 billion sheep and goats in the world, enteric fermentation accounts for 81% of emissions from livestock. Approximately 7-10% of the energy in the feed of ruminants is metabolised into methane. The challenge is to reduce methane emissions while ensuring sufficient food production.
- There is research ongoing in relation to feeding techniques and feed additives but there are barriers within the legislation. If a methane-reducing feed ingredient is classified as a feed material, e.g. seaweed meal, the supplementary claims on reduction have to follow the rules of the marketing regulation for feed (767/2009). The rules regarding climate- and sustainability claims are unclear and such claims may be considered as voluntary claims. Clearer guidelines are required detailing what is required in order for industry to use environmental sustainability claims in an EU-harmonised way. If we do not harmonise environmental and sustainability claims, this could result in issues in relation to marketing of feed materials and compound feed across EU Member States e.g. quantitative reduction claims (see related papers: 'The Potential of Feed Additives to pave the way for a Sustainable Feed Production' and 'Sustainability Claims on Feed').
- The EU has set reduction targets for 2030 for all GHG with anthropogenic methane emissions covered by binding national emission reduction targets under the Effort Sharing Regulation (ESR). However, there is currently no policy dedicated to the reduction of anthropogenic methane emissions.
- There are inherent complexities involved in achieving methane emissions reductions in agriculture as well as in accurately monitoring, verifying and reporting these emissions in that sector. For example, housing animals as opposed to grazing will reduce methane emissions, but could result in increased CO₂ emissions from increases in energy use.

Context

Legal Background

- Regulation (EC) No. 1831/2003 on additives for use in animal nutrition
- Regulation (EC) No. 767/2009 on the placing on the market and use of feed

Other relevant documents

- EU Green Deal, including
- Farm2Fork strategy
- Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions on an EU strategy to reduce methane emissions

Food systems cannot be sustainable unless they are resilient. It is acknowledged that the health and fertility of animals is central to achieving sustainability. Reducing emissions from enteric fermentation can be achieved through improving animal diets using certain feed materials and the use of authorised feed additives. The EU strategies (Farm2Fork) outline that the biggest potential for reducing methane emissions from agriculture is in novel approaches to feeding. To ensure accurate and verifiable quantification of reductions through feeding practices, there should be clear guidelines on what is permitted.

Proposed Action and Future Steps:

The Commission is invited to consider the following to achieve methane emission reduction through feed:

1. Establish an EU-forum to examine methane reduction, primarily in relation to feed

Previously, the Commission has held a 1-2-day EU-Forum on mycotoxins in food and feed, communicating the latest scientific knowledge and EFSA results annually/biannually. It could be considered that a similar, partly-open EU-forum should be established to share knowledge and speed up the process for achieving quantifiable methane reduction through feed. This is required to facilitate competent authority decision makers to formulate national legislation/strategy on methane reduction. The forum could share international scientific results on how to reduce methane emission from ruminants and could focus on some of the following areas:

- Present research findings regarding new methane-reducing feeding ingredients and feeding concepts for ruminants, present data on the methane reducing effect and safety aspects (scientific research).
- Scientific assessment of the climate balance for intensively or extensively pasture farming of ruminants.
- Scientific assessments of any negative side effects on, for example, human or animal health or welfare, environment and practical barriers for implementation.
- Opportunities of breeding for ruminants: genetic selection of low methane-emitting animals, increase the economic weighting on methane production in breeding indexes
- Present research findings on reduction of methane/CO₂/N₂O release from slurry, the need for a holistic approach on methane/CO₂ reduction from feed production (feed > cow > slurry).
- Provide updates on status of authorisation of methane reducing feed additives (e.g. what applications have been withdrawn, submitted etc.).
- Discussion and approaches to data for the national inventory on methane (including methods for balancing of various GHG should be discussed and harmonised).

2. Closer co-operation between SCoPAFF (Animal Nutrition) and the EU-Expert Group regarding the national emission inventories

The Expert Group for sustainability and quality of agriculture and rural development (<https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=2733>) was set up on foot of the EU Methane Strategy report to analyse life-cycle methane emissions metrics. The strategy report also refers to an inventory of best practices, available technologies, and innovative technologies, which will be developed by the Commission. The topics relevant to feed could be disseminated to all Member States via SCoPAFF (Animal Nutrition). It is proposed that Member States and the Commission could ask for specific points



to be put on the agenda of this expert working group to ensure and facilitate a common EU approach to GHG emission inventories.

3. *Consider labelling options for supporting methane reduction from feed materials (Refer to 'Sustainability Claims on Feed' paper)*

The Commission (SCoPAFF-Animal Nutrition) could introduce a discussion on the possibility of including a special point in Regulation (EC) No. 767/2009 (marketing regulation), providing special labelling options to support methane reducing feed materials.

The Commission (SCoPAFF-Animal Nutrition) could facilitate the development of a non-exhaustive list of environmental beneficial feed types, including methane reduction and related claims. The list could be created in a similar way to the list of dietetic feed, i.e. with applications including documenting data for efficacy, with scientific evaluation (by EFSA or Member States) and with agreed specific claims that can be used on the feed.

A guideline on how to get feed on the list could be made available to industry. With this list, the EU Member States could share their knowledge about what kind of products could be used and the associated claims, i.e. work done by one Member State could be used in all Member States. This would speed up the process and improve harmonisation.

3. Feed legislation as a promotor for circularity of nutrients in feed production

Consideration

Prioritisation of research in feed safety issues related to circular and sustainable production methods and ease legislation where this can be done safely in order to promote recirculation of nutrients and use of other resources in the production system.

Issues/barriers for sustainability

In the immediate future we must economise our resources and utilise more advanced methods to recycle nutrients and other resources, in order to achieve a circular economy.

In many ways our feed legislation is already supporting a circular economy by allowing the reuse of materials, but according to The European Feed Manufacturers' Federation (FEFAC), the feed industry already makes use of all safe nutrients that are available. To reach a new level, the industry is about to map the potential additional resources and to evaluate the drivers and obstacles to their access, including those of regulatory nature.

Technological innovation and development are showing that upcycling of what currently could be considered waste has the potential to produce safe, clean and valuable nutrients with a feed purpose. It has however become clear that the current legislation sometimes limits innovation in relation to circular economy. Legislation that was sensible and appropriate when it was adopted, can, if slightly modified, allow the use of new resources e.g. to produce safe phosphorus and protein feed materials. In order to support the innovation towards a more circular economy there is a need to examine the possibilities to update and relax the feed legislation where this does not lead to unacceptable risks regarding feed and food safety or loss in traceability. Good guidance for safe use of feed materials that are allowed today e.g. former foodstuff is also important.

Listed below are examples of regulatory barriers for a circular economy. The concrete proposal and actions related to these subjects are laid down in the paragraph "Proposed actions/future steps".

Feed for insects

Insects are seen as one of the new protein sources in feed and food in EU. Insects are considered farmed animals in the EU and therefore the feed for insects must fulfil the same requirements as feed for other farmed animals. This results in competition with other farmed animals for the same feedingstuffs. In order to fulfil the sustainability potential of insects they should ideally be used as a waste-converter, transforming materials that today are seen as waste into valuable feed materials. Another barrier is that feed for insects used for technical purposes, such as production of biofuel, also compete with feed used for food-producing animals.

A possible solution could be that feed legislation distinguishes between feed that can be used for insects and feed that can be used for other food producing animals, i.e. give some exceptions for insects, as long as this is considered safe. A parallel solution could be to feed insects in relation to their purpose.

It could be considered to request an EFSA risk assessment on one forbidden substrate at a time, e.g. vegetable catering waste as a start, and subsequently amend the legislation according to the risk assessment where possible. Proposals for action and further steps are included in point 3.

Extraction of nutrients and minerals from “waste products” that are highly processed

Phosphorus is a critical essential micromineral. The world's phosphate reserves are decreasing fast and may be exhausted within 40 years. It is therefore necessary to recycle phosphorus and use different sources of origin. One possibility is to add a third chemical phosphorous substance of animal origin (monocalcium phosphate from bone, which is not currently legally permitted, according to Animal By-Product (ABP) - legislation) to the two already approved chemical phosphorus substances (di- and tricalcium phosphate from bone) of animal origin as animal feed. This would require studies on the digestibility and changes to the animal by-product legislation.

Another possibility is to withdraw phosphorus out of fly ash, a resulting material after incineration of products like sewage sludge or meat and bone meal. This phosphorus is cleaner and safer, than much of the phosphorus available for feed at the market today. However, the use of sewage sludge, meat and bonemeal including the products derived from them, are not allowed in feed according to the ABP regulation, and possibly also according to the Feed Marketing regulation. The potential of producing safe phosphorus intended for feed purposes from fly ash from incineration plants should be explored, and if this proves worthy the legislation needs to be adapted. In this light, more focus at the final product and its production process and less at the materials of origin could be considered.

It could be considered to let EFSA assess the risks related to the use in feed of monocalcium phosphate from meat and bonemeal (category 2-material), and the use of nutrients (including monocalcium phosphate) extracted from fly ash from incineration plants incinerating waste and meat and bone meal. This is summarised in proposed action in point 4.

Relaxation of the feed-ban

The use of animal protein as feed is regulated in the TSE-regulation, annex IV. The structure of this annex is very complicated. This makes it very difficult for the user to read and understand. We propose rewriting annex IV, see point 5a.

In 2021 there was a lift of the feed-ban authorising the use of processed animal protein (PAP) of porcine origin in poultry feed and PAP of poultry origin in the feed of porcine animals. This was considered safe according to EFSA, and it was acknowledged that the transmission risk of TSE from non-ruminants to non-ruminants was negligible as long as intra-species recycling is avoided. However, although this new possibility was introduced, its use is limited due to the strict requirements of separation during the collection, transport and processing. We suggest further lifts of the feed-ban and have included some proposals and further steps in point 5 b, c and f.

In 2021, PAP derived from insects was authorised for use in feed for poultry and porcine animals, but the use of such pig PAP and poultry PAP for insects was not discussed and authorised. We are not sure if such regulatory amendment could be possible within existing knowledge and have for this reason proposed an action on this in point 5e.

The processing method required for animal by-product from pigs in the ABP-regulation (method-1, sterilisation) reduce the protein quality substantially and reduce the potential for this protein source to be used in poultry feed. The method-1-sterilisation is perhaps too strict a requirement. It could be considered

to let EFSA assess whether the method could be relaxed, including whether the same method required for animal by-product from poultry could be accepted for pigs, and have proposed an action on this in point 5g.

Non-animal-origin protein rich feed materials produced on nutrients from “waste” sources

Protein rich materials such as microorganisms, yeast and other fungi, microalgae or protein rich plants like water lentils and duck weed can be grown on growing media which are considered ‘waste’ and cannot directly be used as feed for animals. This could e.g. be media like wastewater with manure or residual products from biogas production, where manure and other animal by products are used as substrate. Such medias might be considered forbidden to use, according to the list of forbidden feed materials in the Feed Marketing Regulation No 767/2009, Annex III. It can however be argued that microorganisms, fungi and algae are not animals, and that the growing media is a fertilizer, so the Annex III does not apply. This raises several questions, such as:

1. Does the 21-day quarantine in the ABP-Regulation apply (Regulation No 1069/2009, article 11)?
2. What about problems with carry-over of forbidden materials via the microorganism, algae or plant?

There is a need for a harmonised interpretation of use of substances on the list of forbidden materials for fertilising purpose. The legislative requirements are not interpreted the same way across Member States. As a long-term goal, it could be considered to let EFSA risk assess different realistic production scenarios and set up requirements for these production scenarios. A short time action is described in point 6.

Vegetable catering waste

According to the ABP-regulation catering waste is not allowed as feed. This is because of the risk of spreading animal diseases from animal material in the catering waste. There are restaurants that claim that they can separately collect their vegetable catering waste from the waste containing animal material. For example, unfried potato products or fried potato products that are not sold from fast food restaurants. This can be a potential source of vegetable feed materials that are not used today. An action point related to this is proposed in point 7.

Unexploited marine protein resources

Fish meal and fish oil is defined in ABP-regulation No 142/2011, annex I. Wild harvested aquatic invertebrates were not included in the definition. This creates some challenges in the innovation of new locally produced feed materials from the sea such as sea cucumber, sea urchins, sea squirt (ex. *Ciona intestinalis*). As an example, the harvestable stock of one of the species – the sea urchin *Strongylocentrotus droebachiensis* is estimated to be somewhere between 50,000 to 100,000 tons. An action point related to this is laid down in point 8.

Context

ABP-regulations No 1069/2009 and No 142/2011, TSE-regulation No 999/2001, Feed Marketing Regulation No 767/2009

Proposed actions / future steps

The Commission is invited to consider the following:

1. Support research that can provide a basis for relaxation of the feed regulations which increase the possibilities to have circular and more sustainable production systems. Research under the Horizon Europe programme could be considered.



2. Place sustainability discussions on the EU-meeting agendas and to be proactive with draft sustainability proposals in order to – together with the Member States - remove unnecessary barriers in interpretations and legislations that prevent circular production systems, when this does not pose an unacceptable risk. An EU-guidance document could also help to clarify the situation of producing algae, water plants (like water lentils) and other microorganisms on e.g. manure, fish sludge, wastewater etc.
3. Request EFSA to risk assess whether it could be possible to safely relax the legislation to allow alternative non-competitive feed stuffs for insects and to pin-point risk elements where more research and documentation is needed. EFSA could also assess former food and non-animal side streams which do not have usual merchantable quality, unused animal by-products, kitchen waste, fish sludge and manure to facilitate use of insects as part of a circular production.
4. Request EFSA to risk assess products listed in Annex III of Regulation 767/2009 with a view to developing a list of products derived from Annex III products that could be safe to be used as feed. It could be considered to focus more on the safety of the final product and its production process rather than the materials of origin. The Commission is invited to consider to begin with the assessment of monocalcium phosphate from bone origin_or phosphorus produced out of fly ash. If approved, all applicable legislation will be required to be revised (ABP-, TSE- and Feed legislation).
5. Examine the possibility of amending the TSE-regulation (Regulation (EC) No. 999/2001, Annex IV). Possible proposed changes are as follows:
 - Revision of annex IV on animal feeding in the TSE-regulation, to make it more user friendly.
 - Assess the health risks related to unintended cross-contamination due to use of the same production line for pig- and poultry feed, when use of pig PAP and poultry PAP (intra-species recycling). The residues would be expected to be low, since there are possibilities to control that non-allowed PAP is not actively added to feed.
 - Develop quantitative analytical methods analysing processed animal protein in feed, and not only qualitative method. This would make it possible to quantify the level of cross-contamination of specific types of ABP in all types of feed.
 - Develop analytical methods to make it possible to distinguish between permitted and non-permitted protein in feed.
 - Ease the feed-ban to accept use of pig PAP and poultry PAP in substrate for insects in the same way as for use in feed for poultry and pigs.
 - Consider if the Feed Business Operators own check could replace specific provisions in the TSE-regulation for e.g. transport and storage of animal protein with a pre-authorized cleaning procedure, approved by the official authority when transporters and storage facilities shift between bulk of different animal protein.
 - Risk assess the processing method required for animal by-product from pig (PAP) and to consider the risk of accepting less strict and same processing method as for poultry protein (ABP-regulation 142/2011, annex X).
6. Develop a guidance document to clarify the situation of production of non-animal-origin feed materials produced on nutrients from “waste” sources.
7. Request EFSA to risk assess the use of solely plant-based catering waste as feed under certain conditions.



8. Expand the definition of fishmeal and fish oil in the ABP Regulation (Regulation No. 142/2011, annex I) to include all wild harvested aquatic invertebrates. The present definition excludes potential future feeding stuff like harvested sea cucumber, sea urchins and sea squirt.

4. Use of feed to reduce anti-microbial resistance – e.g. probiotics and fermented feed

Consideration

The use of fermented feed and probiotics has the potential to contribute to the health and welfare of animals in a sustainable way, and consequently to the reduction of the use antibiotics and antimicrobial resistance (AMR). The legislation concerning the micro-organisms to be used for the production of fermented feed and probiotics is currently unclear. Clear guidelines are required in relation to fermentation, the use of microorganisms for fermentation and permissible claims for probiotics.

Research, investment and promotion of new technologies for fermentation of feed products and the development of probiotics is essential.

Issues / barriers for sustainability

The current legislative framework for the inclusion of live microorganisms in feed and for fermented feed (including safety status of microorganisms used for production of safe fermented feed) does not provide clear legal rules and guidance. This will inevitably result in a lack of EU-harmonisation regarding the use of these materials, misleading claims and a barrier for the industry to put these products on the market (what is/is not permitted). Official controls may also be hindered as different competent authorities' interpretations may also vary.

Context

In line with the EU Green Deal and the Farm2Fork Strategy, the negative health impacts of food production must be reduced. One of the means to achieving this is by reducing the need for antibiotics and reduction of antimicrobial resistance (AMR). The goal in the Green Deal is to reduce the use of antimicrobials in agriculture and aquaculture by 50% by 2030. Research has shown that the use of probiotics and fermented feed in the feed of farmed animals can reduce the need for antimicrobials. In order to facilitate the use of these specific feeds it is necessary to have a clear harmonised legislative framework in relation to the classification of these feeds (feed additive regulation and feed material catalogue). Clarification is also necessary with regards to the application procedure for additives, the production methods of fermented feed and the use of claims.

Legal background:

- Regulation (EC) No 1831/2003 on additives for use in animal nutrition (in the process of being refitted) and Regulation (EC) No 429/2008 on detailed rules for the implementation of Regulation (EC) No 1831/2003 as regards the preparation and the presentation of applications and the assessment and the authorisation of feed additives.
- Regulation (EU) No 68/2013 on the Catalogue of feed materials.
- Regulation (EC) No 767/2009 on the placing on the market and use of feed.

Proposed actions / future steps

The Commission is invited to consider the following:

1. Clarify and harmonise interpretation of legislation.

Regulation (EC) No 1831/2003:

- to discuss and clarify the legal situation concerning the terms “probiotics” and “probiotic effect” in relation to the functional group 4b “gut flora stabilizers”



- to consider introducing different functions under the existing functional group 4b “gut flora stabilisers” in the regulation. This to make it possible to distinguish between different effects within the functional group, e.g. a probiotic effect on the intestinal flora contrary to a pure performance effect.

Regulation (EC) No 429/2008:

- to request EFSA to develop a specific technical guideline to help clarifying the coherence between effect (and thereby claims) and endpoints for probiotics and physiological condition stabilisers.
- to make it possible for the applicants to meet with EFSA before notification, to help clarifying about effects and endpoints, if a company want to claim a specific effect, e.g. a probiotic effect.

Regulation (EU) No 68/2013:

The legal requirements for fermented feed materials, fermented feed products and the microorganisms used have to be clear, sustainable and harmonised within the European Union.

It would be beneficial if the European Commission could provide clarity on:

- the legal situation (status) of microorganisms used for production of safe fermented feed
- whether all safe microorganisms can be used to ferment feed if they are inactivated before marketing), and as a part of this-
- as fermentation is not an effect regulated under the feed additive regulation, it would be logical that also microorganisms authorised e.g. as silage additives, can be also used for fermentation if the fermentation products are inactivated before marketing. A clarification on this is needed.
- related questions for microorganisms used to ferment feed, e.g. for products in the feed material register and products in Annex, Part C, Group 12 in the catalogue of feed materials: Which microorganisms can be used /cannot be used to ferment feed and why? Should there be a closer assessment of the safety of fermented products? The legal basis for requiring inactivation of microorganisms in fermented products in the feed material register? What is meant by “inactivated” (0-tolerance or a very low level)? etc.

Regulation (EU) No 767/2009:

The European Commission is invited to create an EU guidance document on claims in relation to prebiotics, synbiotics and postbiotics. These claims are regulated under article 13 in regulation 767/2009 on feed marketing. There is a need for supporting guidance to ensure harmonisation on the EU market.

2. *The European Commission is invited to consider to support (new) technology for bulk fermentation of feed products, e.g. protein-rich biomass, for example via the European Horizon research program, and the development of probiotics.*



5. Sustainability Claims on Feed

Consideration

Clarification and/or regulation of the use of sustainability claims on feed, through an amendment to Regulation (EC) No 767/2009 and/or a guidance document on sustainability claims and a list of authorised sustainability claims.

Issues / barriers for sustainability

To assist feed business operators and the public to use feed that has been produced in a sustainable way it is important to have objective, verified and harmonised sustainability claims on feed labels. In order to ensure confidence in the sustainability claims, it is crucial to avoid the use of misleading claims and also to harmonise the official controls in all Member States.

However, with the current legislation and no existing guidance document, there is a risk that multiple sustainability claims, based on different or no evaluation methodology will be used. This will inevitably lead to confusion and uncertainty among competent authorities, feed business operators and the public regarding the legal requirements when using sustainability claims. In this context it is relevant to note that the EU feed industry (The European Feed Manufacturers Federation (FEFAC)) has drawn up sustainability principles and developed a Feed “Life Cycle Analysis” database and tool in 2020; this could be considered as part of the solution.

Context

If sustainability claims are included as voluntary labelling under article 22 of Regulation (EC) No 767/2009, no legal basis for scientific substantiation exists. The control of such voluntary claims is difficult or impossible. Article 11.1 (a) and (b) (Principles for labelling and Presentation) is the only possible legal basis, which sets out that the presentation of feed shall not mislead the user.

However, more specific regulation, a harmonised EU-guidance document on the use of sustainability claims and a list of authorised sustainability claims will ensure that sustainability claims are objective, measurable, verifiable, and harmonized in the EU.

Proposed actions / future steps

The Commission is invited to consider the following when revising, clarifying or harmonising the interpretation of the legislation on animal nutrition:

- 1. Revision of article 13 and/or 22 of Regulation (EC) No 767/2009 to ensure that all sustainability claims have to be substantiated.*
In the current text of the legislation, sustainability claims can be included as voluntary labelling and there is no clear legal obligation to present scientific substantiation for these to the competent authority. To avoid confusion in the understanding of sustainability claims, the Commission is encouraged to propose such an amendment of Regulation (EC) No 767/2009.
- 2. Consider the development of a guidance document on sustainability claims to clarify the different types of claims and the methodology of evaluating the sustainability claims.*



The evaluation of the sustainability claims should include the following factors: biodiversity, use of water, health related quality, social factors, economic factors, climate neutrality, raw material, energy, soil. This guidance document should also explain how sustainability claims can be added to the list (referred to in point 3 below) or be amended.

- 3. Establish a list of authorised sustainability claims that can be used by feed business operators under defined conditions, similar to the list of dietetic feed claims, in order to harmonise the sustainability claims at European level.*



6. Guidance on the possibility of processing food when food safety criteria have been exceeded

Consideration

Publication of a Guide to Good Practice in relation to article 7(2) on microbiological criteria (2073/2005). The guide would be used on a voluntary basis by manufacturers and could remove the barrier of how this provision can be applied; (manufacturers must have sufficient FSMS to rework safely and the rework activity needs to be approved as suitable to remove the identified risk based on the evidence presented to the relevant Competent Authority). Additionally, developing awareness of this provision for manufacturers would be beneficial and allow the manufacturer to add this possibility to their FSMS in the event that it is required.

Context

Regulation 2073/2005 Article 7(2):

When testing against food safety criteria set out in Chapter 1 of Annex I provides unsatisfactory results, the product or batch of foodstuffs shall be withdrawn or recalled in accordance with Article 19 of Regulation (EC) No 178/ 2002. However, products placed on the market, which are not yet at retail level and which do not fulfil the food safety criteria, may be submitted to further processing by a treatment eliminating the hazard in question. This treatment may only be carried out by food business operators other than those at retail level. The food business operator may use the batch for purposes other than those for which it was originally intended, provided that this use does not pose a risk for public or animal health and provided that this use has been decided within the procedures based on HACCP principles and good hygiene practice and authorised by the competent authority.

Issues / barriers for sustainability

Lack of awareness of this option by manufacturers and lack of a specific Guide to Good Practice.

Proposed actions / future steps

Discussion/exploration at EC Hygiene/microbiological WG on a Guide to Good Practice. Collect data on the uptake of this provision and building awareness of the option at manufacturing level.

Sustainability rationale for ordering

The aim of the proposal is to reduce the amount of food that is wasted. Manufacturers must get approval from their Competent Authority following submission of documentation regarding the proposed rework process and evidence that it will remove the identified hazard, therefore guidance on this would be beneficial and may remove a barrier to using the provision. A Guide to Good Practice would aid this process.

Summary of consideration

Publication of a Guide to Good Practice in relation to article 7(2) in regulation on microbiological criteria (2073/2005). Develop awareness of this provision for manufacturers and inclusion of the provision in their FSMS.



7. Making 'end of shelf-life foods' more attractive to consumers

Consideration

Further research on the effects of the following:

How to make end of shelf-life foods more attractive to consumers and therefore reduce food waste from unsold/discarded products?

Does retail display of 'end of shelf-life' foods put consumers off and is the prospect of purchasing such products too unattractive?

Could retailers do more to promote the benefits of utilising these food products? For example, the 50% off label should always be combined with a label such as "Food is precious". Change of the perception of buying these foods (e.g. highlight the benefits to the environment of choosing the products "environmentally friendly").

Product placement in the retail premises could also be considered (as food safety agencies our remit in relation to this is limited).

Issues / barriers for sustainability

Important to keep these questions in mind when developing policy/guidelines of FBOs. As food safety agencies our remit in relation to this is limited.

Context

The need for further information gathering to forward this issue.

Proposed actions / future steps

Conduct research in MS and ultimately COM guidance.

Sustainability rationale for ordering

It is difficult to define the impact this could have in terms of sustainability.

Summary of consideration

The ultimate goal is to make end of shelf-life foods more attractive to consumers and therefore reduce food waste from unsold/discarded products. As food safety agencies our remit in relation to this is limited.



8. Possible actions of consumers and food handlers in relation to food waste reduction

Consideration

The role of Food Safety Authorities to contribute advice to this as follows, noting that the level of awareness differs in different MS:

Education and training of consumers and food handlers in safely using, storing and preserving foods:

- Education around differences in UsedByDate (UBD)/BestBeforeDate (BBD), when foods are safe to eat past BBD (not UBD), ability to rely on sensory perception for BBD foods. Starting food safety/waste reduction early in education – include in educational curriculum.
- Nudges to reduce food waste in the home and in the shopping situation, provision of environmental impact information (concentrated on those classes of food wasted most).
- Collation and distribution of Q&As and frequently asked/myth-busting facts about food durability/storage/losses.

Context

Not only on the level of food handlers but also on consumer level, there is an urgent need for education and training in reducing food waste.

Issues / barriers for sustainability

Government finance is required to aid these provisions.

Different ministries, including education (increasing awareness of a food waste agenda), need to work collaboratively.

Proposed actions / future steps

MS to discuss this at National level with all relevant ministries involved.

Present this consideration to the EC WG on General food law and Sustainability of food systems. A platform on Food losses and Food Waste or an Expert Group on the provision of food information to consumers could also be considered in this regard.

Sustainability rationale for ordering

Top priority is the first bullet point of considerations: *“education around differences in UBD/BBD, when foods are safe to eat past BBD (not UBD), ability to rely on sensory perception for BBD foods. Starting food safety/waste reduction early in education – include in curriculum.”*

Summary of consideration

Education and training of consumers and food handlers in safely using, storing and preserving foods.



9. New Technologies

Consideration

- Should the use of microbial cultures be approved as additives when used on RTE products to retard bacterial growth and increase shelf life?
- The potential use of bacteriophages used on/in food contact materials working against pathogens could be considered addressed in terms of regulation and classification.
- There is the possibility to retrofit regulations to make approval processes etc. run smoother, however, the process of legislative amendment can take years while required changes are needed in the immediate term. Is there a way to speed up processes of legislative change to meet our climate goals?
- It could be considered to identify legislation that is not compatible with sustainability or obstructive to sustainability.
- What can be done within the existing regulation to smoothen the authorisation process without compromising food and feed safety e.g. Introduction to proposals on specific legislative amendments and future research to be conducted.

Context

1333/2008, regulation on food additives

2004/1935, framework regulation for food contact materials

Issues / barriers for sustainability

The use of microbial cultures on ready-to-eat products to retard bacterial growth and increase shelf life has been discussed in the EU-working group on food additives. The majority of Member States and the EU-Commission chair of the group were of the opinion that this use falls within the scope of the EU Regulation on food additives and the microbial cultures should therefore be applied for and authorised before use. It should be investigated, whether bacteriophages on or in food contact material fall under the scope of the framework regulation for food contact material.

Proposed actions / future steps

It is relevant that the EU-Commission make an official note about the interpretation of this use of microbial cultures on ready-to-eat products to retard bacterial growth and increase shelf life. COM takes queries to EFSA.

Sustainability rationale for ordering

Could have a large impact but needs careful consideration and regulation process flow efficiencies made.

Summary of consideration

Addressing specific queries outlined above in relation to new technologies.



10. Import legislation: reducing food waste at BCP

Consideration

- Explore possible amendment of legislation obliging importers to check the health certificates before the shipment has left the third country of origin (incl. approved country and approved establishment listed correctly) in order to avoid shipments being rejected at BCP.
- Guidance: CA in MSs to ensure guidance to importers that rejected consignments in some cases can be sent for special treatment instead of redispach/destruction. EC possibly reminding MS to ensure guidance to importers (inform importers of possibilities and preferably list these in order of least problematic or environmentally damaging).
- Collect data and get an overview of food waste at BCP: ask the Commission to analyse Data from TRACES - how many consignments sent for special treatment/redispach/destruction? Is there a pattern or do all MS use the full range of possibilities in the OCR? It could be considered to collect more data based on harmonised collection principles. The establishment of uniform collection of appropriate data in all Member States would be useful.
- Consignments entering the EU without border control. As a general rule, all consignments listed according to OCR, Article 47(2) must go for border inspection and if not presented at BCP they must be destroyed or re-dispatched to a 3rd country. According to the OCR the National authority can decide another measure which ensures compliance with EU legislation. Some MS allow such consignments to be brought back for a delayed check at BCP (possibly reducing food waste). The Commission is invited to consider to seek best practices in MS for interpretations of legislation which would forward this issue (incl. responsible use of resources).

Issues / barriers for sustainability

No clarity on how much food waste is occurring at BCP. Are MS using possibilities in the OCR, importers are now aware of possibilities in OCR. Mistakes causing shipments to be rejected.

Context

OCR, Articles 47, 66, 71 and 72

Proposed actions / future steps

- Invite the Commission to discuss with relevant WG under the Commission to see if this proposal to adapt legislation is a possibility.
- Invite the Commission to discuss the possibility of asking MS to ensure guidance to importers in case of rejected consignments
- Invite the Commission to analyse data from TRACES - how many consignments sent for special treatment/redispached/destroyed? Principles could be put forward to the EU-Commission and/or to the sub-group of Food Waste Measurement.
- Invite the Commission to seek best practices in MS for interpretations of legislation in relation to the handling of consignments not presented for control at BCP.



11. Intelligent/active packaging to improve the durability of food, and better inform the consumer

Consideration

Intelligent packaging could be used at non-retail levels of the production process *i.e.* shelf life monitoring in large batches.

If intelligent packaging could be used to monitor aflatoxins in imported batches of seeds for example, it could remove the requirement to destroy large batches due to sampling (screening method).

Active packaging could increase the shelf life of food (e.g. reducing water activity to reduce spoilage and extend shelf life).

Issues / barriers for sustainability

Intelligent and active packaging can elongate the shelf life which is beneficial in terms of food waste but intelligent and active packaging is frequently not recyclable and this needs consideration as it causes an issue in terms of sustainability.

Consumer reaction is unknown.

Costly products.

The EU regulation on active and intelligent materials and articles requires authorisation of active substances used in the material. The authorisation and community list of authorised substances is not yet in place.

Context

2004/1935 article 4, framework regulation for food contact materials

2009/450 on active and intelligent materials and articles intended to come into contact with food

Proposed actions / future steps

Discuss further in relevant WG on FCM

Summary of consideration

Weighing up the pros and cons of smart packaging and the specifics is important when considering use of smart packaging in relation to reducing food loss and food waste.



Annex II – table of principles

Under the WG Sustainability, the sub-group on the legislative framework for sustainable food systems have considered proposed principles that would underpin a future sustainable framework.

The table below lists the proposed principles, providing contextual information to help support each one.

Number	Proposed Principle	Context to support each proposed principle
1.	There is a need for a broad definition of a sustainable food system	Although the FAO definition of a sustainable food system has been in place since 2014, there is a need for a broad understanding and agreement of what a sustainable food system should deliver and contribute to. Should 'food safety' and 'food security' be referenced and differentiated in terms of a definition of a sustainable food system?
2.	Responsibilities of all food chain actors	The transition to a sustainable food system will only be possible with behaviour change across the entire food chain with all food actors playing their part in the transition. While some actors will have more ability to take action, all actors must play their part. It is important to define responsibilities and raise awareness that all actors include those involved in the production and consumption of food – all actors must be aware of their ability to be agents of change.
3.	Sustainable framework must include requirements for feed (all stages)	In addition to the requirements for food, the legislative framework for sustainable food systems must also include feed in the scope, to ensure that all stakeholders are on board with any sustainable framework.
4.	Sustainability principles already set down in sectoral legislation must be considered	To ensure a complementary approach, it is necessary to take into consideration any other sustainability principles set down in existing sectoral legislation and link these to the legislative framework on sustainability.



5.	Food as common good/commodity	<p>Sustainability approach must be at the centre of considerations for all stakeholders.</p> <p>In contrast to the “Food as a commodity” narrative, linked to the industrial food system and considered to be the dominant discourse regarding the valuation of food.</p> <p>Provide alternative solutions to food production. Multiple social, economic, cultural and ecological dimensions negotiated in new governance structures and institutions.</p> <p>Food democracy and strong participation of citizen-consumers through social organisations.</p> <p>A sustainable approach should include broad participation of all stakeholders including consumers.</p>
6.	Timeline/Transition period	<p>The transition time needs to be ambitious but reasonable also to allow significant action towards a sustainable food system without delay.</p>
Food Safety and Food Sustainability Relationship		
87	Only safe and secure sustainable food must be placed on the market	<p>It is considered that the legislative framework will be a complementary approach to food safety and so it is important to reflect or reiterate the food safety piece here.</p> <p>Ideally, all food products on the EU market should stem from production processes that comply with ambitious sustainability standards, so that, currently for food safety, consumers would not have to choose between products from sustainable or unsustainable production.</p>
8.	One Health approach	<p>One Health is the concept that the health of humans, animals, and the environment are inextricably linked. This approach can be applied to food safety, sustainable food production, and environmental stewardship.</p> <p>‘One Health’ is often defined as “an approach to designing and implementing programmes, policies, legislation and research in which multiple sectors</p>



		<p>communicate and work together to achieve better public health outcomes.”</p> <p>There is a need to broaden the application of the One Health approach to sustainability and encompass a broader range of ecologically mediated diseases, such as encompassing the agendas of AMR, malnutrition, epidemic preparedness, integrated surveillance systems, environmental health, food systems and food safety – which are all driven by and dependent on healthy ecosystems, animal health and well-being.</p>
Monitoring and Assessment		
9.	Food systems analysis	<ul style="list-style-type: none"> a) Descriptive analysis of the structure of the food systems – emphasising on the identification of key components and key stakeholders; b) Explorative analysis of different policy options and opportunities for improving food systems performance; c) Interactive analysis of food system transitions and adaptive innovation strategies for creating synergies and coherence between key agents.
10.	Universality	<p>No matter the entry point or application, the same sustainability framework can/should be used for assessing any eco-agri-food system, and can be used equally by policymakers, businesses, producers and citizens.</p> <p>The principle of universality stands in contrast to the current model of siloed assessments, wherein each assessment of a particular eco-agri-food system includes an independently determined set of economic, environmental and social variables, evaluated using different methods which then provide, unsurprisingly, non-comparable results.</p>
11.	Comprehensiveness/ Systems thinking and multilateral approach	<p>Systems thinking is an approach that focuses on the identification of interrelationships between components of a system. A systems approach is critical to assess/monitor the stocks, flows, interactions, synergies, trade-offs and the hidden costs and benefits, including dependencies and</p>



		<p>impacts upstream and downstream, are part of each assessment over the entire eco-agri-food value chain, covering all aspects of production and consumption – and applying multiple dimensions (environment, social (incl. health) and economic) and domains (quantity, quality, distribution and resilience).</p> <p>System-based problem framing avoids reducing the complex dynamics of food systems to a single problem and recognizes the involvement of many interacting subsystems.</p>
Food Systems Governance		
12.	Boundary-spanning structures	Boundary-spanning structures address the challenge of bridging different subsystems and related fragmented siloed organisational structures.
13.	Adaptability	Adaptability addresses the challenge of uncertainties and volatility of food systems as complex socio-ecological systems. Enhanced flexibility, reflexive learning (by doing) and relational learning by sharing information across scales and communities are instrumental in adaptive food system governance.
14.	Inclusiveness and participation	Inclusiveness underlines the political character of food system governance by addressing the question of whom to include and whom to exclude. Avoiding the often identified problem of limited citizen involvement is important to ensure the legitimacy, accountability, justice, fairness and equity necessary for sustainable development.
15.	Transparency	Information on the sustainable framework/sustainability requirements should be readily available and communicated clearly to the general public. Promoting transparency and minimizing the likelihood of misinterpretation is important to promote sustainability. Information should be accessible in content and dissemination, so that it can be translated into holistic action that employs the best solutions in various regions and domains.



		<p>Industrial agribusiness operates in opposition to a transparent food system, benefitting from “strategic unknowns,” or efforts to generate confusion and defuse knowledge, in order to maintain ignorance, discordance and lack of action. Any claim relating to sustainability in the labelling or food information of a food must be verified. Therefore, consideration should be given to ‘third party audits’ as a possible tool of transparency.</p>
16.	Transformative governance and redirecting structural power	<p>Transformative governance has the capacity to respond to, manage, and trigger regime shifts in social-ecological systems at multiple scales. It represents a strategy to utilize a comprehensive systemic assessment approach (food analysis) to change current corporate food regimes to a sustainable model by altering the structures and processes that define the system.</p> <p>Transformational governance is dependent on flexible decision-making and institutional processes that value adapting and learning from trial and error.</p> <p>It addresses the need to overcome inherent resistance within present food systems governance and to support transitions to fundamentally different food systems.</p> <p>Transformative governance is directly related to multi-level participation, strategic political partnerships, democratic control of knowledge, public participation, and engagement with businesses and investors.</p>
17.	Three dimensions of sustainability	<p>In any regulatory and non-regulatory initiative regarding the food system, all three dimensions of sustainability – environmental, economic and social dimension – should be acknowledged simultaneously.</p>