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Comments on the draft Implementation Rules SANCO/7066/2010 // ABPR (EC) No.1069/2009 with respect to the processing of Cat. 2 and 3 materials in compost and biogas plants

A. Definitions

Proposal to amend definition 14

14. '**composting plant**' means a plant in *which materials of animal origin are at least part of the material which is submitted to biological degradation under aerobic conditions for the production of compost or otherwise bio-stabilised material of animal origin with the aim of material recovery*;

Justification:

In some MS plants which provide only so-called bio-drying/bio-stabilising processes argue to be **not a composting plant** as defined in Reg. (EC) Nr. 1069/2009, because they would not produce compost and therefore fall out of the remit of the regulation. These plants are able to offer services at significantly reduced costs compared to composting plants which are regulated under the ABPR. Though treating the same ABPs this leads to a biased competition.

Proposal to introduce a new definition (with reference to Annex VII section I chapter II, para 1):

Based on practical experience in agreement with national authorities the interpretation of a '**closed composting reactor**' referred to in Annex VII section I chapter II, para 1: includes also the coverage with special fabric fleece, semipermeable membranes as well as a layer of approximately 10 cm compost covering the entire raw material mix during the high temperature/hygenisation phase.

'Closed composting reactor' means that the first stage of the composting takes place in a vessel or building with doors that can be closed or on a windrow sealed with a special cover or layer of already composted material that prevents immediate access of birds or vermin to the material which is treated.

Justification:

Alternative enclosures/coverage of compost piles have shown sufficient effectiveness in preventing access of animals to not hygienised waw materials in practice and got the approval in a number of Member States. (see also **Amendment E, Point 2.**)

B. Organic Fertilisers and soil improvers; Feeding of farmed animals

ANNEX X – SECTION II – Identification – Point 2 (b)(v)

Amendment:

'in the case of organic fertilisers and soil improvers, **delivered to farmers** ~~other than those which are in ready-to-sell packages of not more than 50 kg in weight for use by the final consumer on which it is indicated that they are not~~ destined for application to land *to which farmed animals have access*, the farmed animals must not be allowed access to the land for at least 21 days following application of these materials'.

Justification:

The information about the 21 days waiting period before harvesting of feeding stuff or grazing must ONLY be provided to framers. It needs NOT to be indicated generally at the sales point in order to avoid irritation of compost users from other sectors. This can be indicated to some extend by inserting "*to which farmed animals have access*"

It should be clear that this declaration is not needed when compost is delivered to citizens e.g. for gardening and landscaping purposes, even if offered at higher quantities. However if delivered to farmers and used for herbage and pasture land the waiting time of 21 days should be declared and respected accordingly.

[Former] foodstuff [Art. 10(f)] and feeding stuff [Art. 10(g)] and possible relaxations/derogations

C. Annex VII – Section III – Chapter II – Point 3

We appreciate the new point 3 in Chapter II of Section III in Annex VII opening the possibility for applying NATIONAL hygienisation rules (transformation parameters) also "for animal by-products and derived products referred to in Article 10(f) and (g) of the Animal By-products Regulation"

ANNEX VII – Transformation into Biogas, Composting

Clarification

In the current reading of the new ABPR all requirements and provisions laid down in this Annex have to be seen as “*Common rules*” which apply for all types of composting and biogas plants. Therefore individual regulations of Member States can only be adopted if they do not conflict with this Annex. This is – in the current reading with the exception of the “*Alternative Transformation Parameters*” [Chapter II of Section III] – also valid for *CATERING WASTE*

D. ANNEX VII – SECTION I – CHAPTER I: Biogas plants

Proposal to add a new letter (f) to point 2.:

.....

or shall not be mandatory for biogas plants

(f) if the treatment in the biogas plant is followed by composting of the digestion residues in an approved composting plant

Justification:

This should make clear that a post treatment after anaerobic digestion in an approved composting plant is acknowledged as “hygienisation” process.

E. ANNEX VII – SECTION I – CHAPTER II – Composting plants

Amendment to Point 2)

OPEN WINDROW COMPOSTING in principle should be accepted as “other types of composting systems”. This should be covered by point 2.:

“2. However, **other types of composting systems** may be **allowed** provided they...”

Now, this option is drastically diminished by the new CONDITION in letter (b):

“(b) transform only materials referred to in points 2(a) to (e) of Chapter I;”

Justification:

We **urgently ask** to **DELETE** this condition of **par. 2 (b)** otherwise open windrow composting would be made impossible even for catering waste or former foodstuff/feedingstuff etc. because here for all Category 3 material processing methods 1 to 5 and for aquatic animals 1 to 6 are required !

The other option is a new definition of ‘**closed composting reactor**’ as proposed in **amendment A**.

F. ANNEX VII – SECTION II: Hygiene requirementsClarification:

The entire hygiene requirements apply for ALL Category 3 materials including catering waste, even if NATIONAL TRANSFORMATION PARAMETERS for catering waste are in place!

Amendment to point 2

2. Containers, receptacles and vehicles used for transporting untreated material must be cleaned and disinfected in a designated area. This area must be situated or designed to prevent risk of contamination of treated products. **Containers, receptacles and vehicles used in the municipal collection scheme are excluded from this obligation**

Justification:

It will not be practical or possible to implement cleaning and disinfection collection bins at the level of households, the same holds for collection vehicles in municipal collection schemes. It also interferes with Art. 21 (4) exemption of CATERING WASTE from the requirements for *collection, transport and disposal*. It should be regulated in accordance to Article 21 Waste Framework Directive.

Amendment to Par. 3):

3. ~~“Preventive measures against birds, rodents, insects or other vermin must be taken systematically. **A documented pest control programme to control pests and the access of animals must be applied** must be used for that purpose.”~~

Justification:

The FIRST SENTENCE SHOULD BE DELETED, because in practice by some Member States it is interpreted that even the reception and tipping of catering waste or former foodstuff has to be done in a completely closed area ... and even then it is impossible to prevent insects from having access to raw material.

Amendment to Par. 8):

8. *Plants shall have adequate facilities for the cleaning and disinfecting of vehicles and containers. **Plants that only process catering waste and former foodstuffs collected through the municipal collection system are excluded from this obligation for collection vehicles and collection bins.***

Justification:

It will not be practical or possible to implement cleaning and disinfection collection bins at the level of households, the same holds for collection vehicles in municipal collection schemes. It also interferes with Art. 21 (4): Exemption of CATERING WASTE from the requirements for *collection, transport and disposal* ! It should be regulated in accordance to Article 21 Waste Framework Directive.

G. ANNEX VII – SECTION III: Transformation parameters – CHAPTER I: **STANDARD** transformation parameters

Amendment to point 1.:

“However, Category 3 milk, colostrums, milk products, animal by-products **and derived products referred to in Article 10(f), (g) and (p) of the Animal By-products Regulation** may be used without pasteurization /hygienisation as raw material in a biogas or composting plant if the competent authority does not consider them to present a risk of spreading any serious transmissible disease.”

Justification:

This is in line with the relaxation as given in point (2) and (3) in Chapter II (*Alternative transformation parameters ...*) of Section III, which allows national regulations for transformation parameters for each of the mentioned ABPs!

The **introduction of flexible standard transformation parameters** (see examples from NL, BE and AT in the Annex) will be **proposed to the Scientific Committee (EFSA). As a starting point we propose to apply the Dutch scheme as (minimum) standard transformation parameters which are the result of a scientific research study:**

Hoornstra, E., van Moxtel, L.B.J., 2003. TNO-rapport V5096 – Alternatieve procescondities voor compost, Nederlands Organisatie voor Toegepast-natuurwetenschappelijk onderzoek/Netherlands Organisation for Applied Scientific Research; Risk Management & Microbiology, Zeist, 14 februari 2003.

This study demonstrates that with the proposed time/temperature regimes at a particle size of 100 or 150 mm a equivalent reduction of tested indicator organisms (*Salmonella*, *E.coli* O157:H7, *Listeria monocytogenes*, *Campylobacter*, *Staphylococcus aureus*, *Giardia*, *Cryptosporidium*, *Ascaris*, *diverse worms*, *Enteroviruses*, *Hepatitis A.*, *Norwalk-viruses*, *Mouth & Foot disease virus*) as compared to 70°C/1h/12 mm is achieved.

In addition 12 mm particle size contradicts the microbiological needs in a properly managed aerobic degradation and composting process. It may lead to partly anaerobic conditions which may also endanger an even oxygen as well as temperature distribution. Oxidative conditions are a key even in the biological hygienisation (hygiene stabilisation) process.

Furthermore, it is not only the thermal effect which is responsible for a sufficient eradication of pathogenic indicator organisms but also the microbiological breakdown during maturation under well managed processing conditions. Therefore, with respect to hygienisation the quality management of the entire composting process must be considered. In composting process time and process parameters (aeration, humidity, C/N ratio, pH, Size of compost pile etc.) even at temperatures below 50 to 55 °C are of equal (if not higher) importance as a short time of high temperature (>50 to 70 °C) exposure.

Max particle size (diameter, particles modelised as cylinders)	Minimal temperature of material in the treatment plant	Minimal treatment time at corresponding temperature in the treatment plant (in hours)
100 mm	70 °C	7
100 mm	65 °C	9
100 mm	60 °C	13
100 mm	55 °C	26
150 mm	70 °C	8
150 mm	65 °C	12
150 mm	60 °C	16
150 mm	55 °C	32

H. ANNEX VII – SECTION III: Transformation parameters – Chapter II : Alternative transformation parameters

Clarification:

Alternative transformation parameter should be accepted by means of a validation procedure for certain treatment types and technologies.

A number of research studies (NL, BE, DE) have now shown that flexible time temperature regimes (beginning with 50°C) in combination with consistent quality management (monitoring programme, minimum effective retention time in AD, regular turning in open and closed composting systems, humidity control etc.) lead to an effective (*equivalent*) reduction of pathogens and provide safe end products from an epidemiological standpoint.

- It is now necessary to establish a well defined procedure to recognise these AD and composting systems on EU level. E.g. there exist successful research results of AD and composting with thermophilic treatment [e.g. 50 – 55 °C and hydraulic retention time of 10 - 15 h].
ECN will prepare an application to EFSA via Member States using the requested application form.
- Further we propose that once validated processes - which comprise the entire production process including all necessary quality management and quality assurance procedures - will be officially acknowledged on EU level
These processes would be acknowledged for each individual biogas or composting plant respectively in the EU. This needs a procedure for registration of validated processes on a European level.
Successful examples exist e.g. with German BGK process types (BAUMUSTER) validation principle or the Dutch scheme.
- Possible procedure for the EU wide recognition of validated process:** DG SANCO would ask Member States to check and accept a proposed *Validated Transformation Process*. If no full acceptance – EFSA would be asked for it's opinion. If full acceptance, an official EU Website lists and describes the validated processes. ECN could serve as a coordinating body for the validation projects.
Open Question: To what extent will MS recognise the validations of other countries and accept the produced compost (e.g. in UK from France) ?

I. Simplification of the standard VALIDATION PROCEDURE [point 1. of Chapter II]

Based on the experience of the recent years some amendments which simplify the validation procedure would be necessary and should be discussed [e.g. close correlation between *Enterococcae* reduction and *Provirus*. Therefore we propose not to test for the reduction of *Parvovirus* in addition to *Enterococcae faecalis*]

We have added a literature list and also attach papers from The Netherlands, Belgium and Germany

Amendment in point 1. (d) (i):

Delete requirement ~~'reduction of infectivity titre of thermo resistant viruses such as parvovirus by at least 3 log10, whenever they are identified as a relevant hazard; and'~~

Justification:

Measurement is unpractical, difficult to execute and expensive and not so accurate. At the same time first measurements found a D value of 1.54 in digestate (codigestion manure) for *Enterococcus faecium* and in the same matrix a D value of 2,76 for bovine Parvovirus¹. which means a 5,4 log10 reduction of *Enterococcus faecium* (not *E. faecalis*) goes together with about a 3log10 reduction of bovine Parvovirus. For practical reasons and uniformity (accredited reproducible measurements) we suggest demonstration of a 5log10 reduction of *E. faecalis* is the 'proportionate' and applicable rule.

¹ Stöcklein (Untersuchungen zur Tenazität von ausgewählten Mikroorganismen in landwirtschaftlichen Biogasanlagen unter besonderer Berücksichtigung von *Campylobacter jejuni* und *Clostridium perfringens*. Berlin 2005 Journal-Nr.: 2885 page 93 table 5

J. Annex VII – Section III – Chapter II – Point 2. and 3.

Amendment of point 2.

2. However, pending the adoption of rules as referred to in Article 15(2)(a) of the Animal By-products Regulation, competent authority **Member States** may, when catering waste is the only animal by-product used as raw material in a biogas or composting plant, authorise the use of specific requirements other than those laid down in this Chapter provided that they guarantee an equivalent effect regarding the reduction of pathogens.

Justification:

It is important that these national regulations are uniformly issued on a national basis and not by local (regional authorities which would create enormous confusion amongst municipalities responsible for catering waste collection and treatment as well as the compost and biogas sector.

We appreciate and support the amendments made in point 3 of this Chapter.

K. SECTION III – CHAPTER III: Standards for digestion residues and compost

1) *E. coli* or *Enterococaceae* ... not needed in routine analyses

Amendment:

Delete standards for *E. coli* / *Enterococaceae*

~~*Escherichia coli*: $n = 5$, $c = 1$, $m = 1\ 000$, $M = 5\ 000$ in 1 g; or *Enterococaceae*: $n = 5$, $c = 1$, $m = 1\ 000$, $M = 5\ 000$ in 1 g; and Representative samples of the digestion residues or compost taken during or on withdrawal from storage must comply with the following standards:~~

Justification:

Based on the experience of MS having established a well advanced composting and AD regime based on HACCP principles including an external Quality Assurance Scheme (QAS) it has been proven that measuring *Salmonella* is sufficient as indicator for a safe product.

2) Sampling routine

Clarification:

Measurements in **5 independent samples** do not comply with statistical correct **representative sampling** rules in waste management as well as in the area of soil improvers. Therefore **acknowledged sampling protocols** based on European or national standards which include a **minimum number of sampling points relative to the batch size** and the production of a **combined sample** which is reduced to the size of a laboratory sample by stratified methods should be accepted as an alternative.

The current text should not include a strict interpretation of sampling technique details. A general request for **“representative sampling”** is sufficient and would offer flexibility to national regulations.

L. ANNEX X – SECTION I – Collection & transport ; CHAPTER I: Vehicles & containers

Amendment to point (2.) of CHAPTER I:

The proposed text change is:

Vehicles and reusable containers, and all reusable items of equipment or appliances that come into contact with animal by-products or derived products, *other than derived products which are placed on the market as feed in accordance with Regulation (EC) No 767/2009 and which are stored and transported in accordance with Annex II of Regulation (EC) No 183/2005 and other than Cat. 3 material referred to in Art. 10 (f) and (g) of Regulation (EC) No 1069/2009 which have been collected within the municipal collection scheme* must be maintained in a clean condition. In particular, they must be”

Justification:

Former foodstuff/feedingstuff should also be exempted in the same way as catering waste if it is collected through the municipal collection scheme ! Catering waste is exempted anyway by Art. 21(4) and rolled out under waste/environment legislation!

M. ANNEX X – SECTION II – Identification

- Catering waste is exempted from this annex as far as collection and transport is concerned [(Art. 21(4)]
- Important is also point 3: it indicates that MS may lay down national rules for identification for any transport within the territory of a MS.

Point 2 (b) (v): see amendment B Organic Fertilisers and soil improvers; Feeding of farmed animals

Amendment:

Point 6:

Proposal to add a new letter (c):

(c) points 1 to 5 shall not apply to catering waste and Cat. 3 materials as referred to in Article 10 (f) and (g) collected through the municipal collection scheme.

Justification:

The municipal collection scheme is well identified in an unequivocal way (including vehicles and containers). Therefore no misinterpretation of the destination and use of the collected organic waste materials destined for the treatment in a composting and biogas plant is likely to occur.

N. ANNEX X – SECTION III – Commercial documents and health certificates

Amendment:

Point 1: Former foodstuff and feeding stuff should be exempted in the same way as catering waste if it is collected through the municipal collection scheme!

Proposal to add a new letter (d):

(d) Cat. 3 material as referred to in Article 10 (f) and (g) is collected within the municipal waste collection scheme destined for being processed in an approved composting or biogas plant.

Justification:

The municipal collection scheme is well identified and controlled by the municipal waste authority. It follows a regular (from several times a week to monthly) and constant collection routine. Therefore individual commercial documents for each consignment or collection tour are not needed.

O. ANNEX XI – SECTION V – Handling of animal by-products after their collection

Amendment:

Letter (i)

This section refers to Art. 24(1)(h) which indicates “operations such as sorting, cutting, chilling, freezing, salting, removal of hides and skins or of specified risk material;”

In the Annex now letter (i) also includes:

”(i) hygienisation/pasteurisation of animal by-products destined for transformation into biogas or composting;”

This should be deleted.

Justification:

This aspect is fully covered by ANNEX VII.

P. ANNEX XII – OWN CHECKS AND HACCP

Clarification:

The rules on own checks and HACCP must not be too descriptive and detailed because they vary a lot depending on the treatment technology. The Principle laid down in Art. 27 “procedures based on the HACCP principles” in combination with Art. 27a “National guides to good practice” will provide a flexible regime under the competence of national bodies (typically already in place by means of *Quality Assurance Schemes* for composting and anaerobic digestion plants in a lot of Member states).

As a follow-up we will provide some of the existing national QA-Schemes and guidance documents for composting plants which are based on a HACCP principle.

Q. ANNEX XIX – OFFICIAL CONTROLS; SECTION III – Specific requirements

CHAPTER VII – Official controls regarding the application of organic fertilisers and soil improvers, other than manure

Amendments:

Change Title to: “Official controls regarding the application of organic fertilisers and soil improvers, other than manure **and compost**”

Change Point 1 to: “The competent authority shall carry out controls at regular intervals on farms where organic fertilisers and soil improvers other than manure **and compost** are applied to land to which farmed animals might have access. ...”

Justification:

Compost application can be exempted from the standard control measures because it can be considered as safe product when respecting all processing provisions (following HACCP principles) and quality criteria in place. In addition on-farm controls and inspections should be ‘proportional’ to the risk involved.

Another aspect are the existing national and foreseen EU wide End-of-Waste (product) Regulations for compost. This establishes the free marketing of compost as a product also between MSs. This makes it difficult to trace back the use of the compost on a certain plot of land and execute the intended control by the authority.

R. National examples for flexible standard time-temperature regimes

The following standard transformation parameters have been officially established in Member States after scientific evaluation and have been proven very successful over more than 15 years.

Table 1: Flexible system of time temperature regimes as indirect control of hygienisation effect during composting – [Austrian Regulation](#)

Minimum Temperature	Duration - Records
Open and enclosed Windrows (also in halls) with or without forced aeration	
55 °C	<u>Automatic, continuous recording with probe</u> ; minimum temperature to be met over a time span of 4 hours, each after 5 mechanical turnings; total recording period: 10 days
55 °C	<u>Discontinuous recording at least once per working day*</u> ; minimum temperature to be met on all recording days, within a total recording period of 10 days; at least 3 mechanical turnings
60 °C	<u>Discontinuous recording at least once per working day*</u> ; minimum temperature to be met on 3 x 3 recording days, within a total recording period of 14 days; at least 2 mechanical turnings
65 °C	<u>Discontinuous recording at least once per working day*</u> ; minimum temperature to be met on 2 x 3 recording days, within a total recording period of 14 days; at least 1 mechanical turnings
Enclosed and in-vessel systems with forced aeration (e.g. boxes, tunnels)	
55 °C	<u>Automatic continuous recording with probe</u> ; minimum temperature to be met over a time span of 4 days within a total period of 10 days
65 °C	<u>Automatic continuous recording with probe</u> ; minimum temperature to be met over a time span of 3 days within a total period of 10 days

* Also automatic, continuous recording with probes is possible

Table 2: Flexible system of time temperature regimes as indirect control of hygienisation effect during composting – [Dutch Quality Standard for Compost](#), 'Beoordelingsrichtlijn Keurcompost 2009/2010'.

Data are backed up with a scientific report which is available at request.

Max particle size (diameter, particles modelised as cylinders)	Minimal temperature of material in the treatment plant	Minimal treatment time at corresponding temperature in the treatment plant (in hours)
100 mm	70 °C	7
100 mm	65 °C	9
100 mm	60 °C	13
100 mm	55 °C	26
150 mm	70 °C	8
150 mm	65 °C	12
150 mm	60 °C	16
150 mm	55 °C	32

Table 3: Time-Temperature Regulation of [Flanders \(BE\)](#):

<p>The time-temperature-process circumstances to be met for effective hygienisation in Flanders are (Literature: see references from Ryckeboer, 2001, Ryckeboer, 2003 and Ryckeboer et al. 2002a & b):</p>
<p>Green waste composting</p> <ul style="list-style-type: none"> - min. 10 weeks of composting, at min. 45°C, from which min. 4 days 60°C or 12 days 55°C - min. 4 turnings (mixing, homogenisation) - moisture control during the process - moisture content (min. 40% during composting, in the early phase up to 55% is preferable)
<p>Vegetable Fruit and Garden vfg-waste composting (vfg excludes meat)</p> <ul style="list-style-type: none"> - min. 6 weeks of composting, at min. 45°C, from which min. 4 days 60°C or 12 days 55°C - min. 4 turnings (mixing, homogenisation) - moisture control during the process - moisture content (min. 40% during composting, in the early phase up to 55% is preferable)
<p>Vegetable Fruit and Garden vfg-waste anaerobic digestion followed by composting</p> <ul style="list-style-type: none"> - min. 2 weeks of thermophilic AD (> 50°C), followed by at least 2 weeks of composting at min. 45°C, from which min. 4 days 60°C or 12 days 55°C - for mesophilic AD: same treatment criteria as for vfg-waste (composting is the hyg. phase), 4 weeks instead of 6 weeks composting

Literature:

(preliminary list)

- Bundesgütegemeinschaft Kompost e.V., 2006. Methodenbuch zur Analyse organischer Düngemittel, Bodenverbesserungsmittel und Substrate. Kapitel V "Verfahrensprüfungen". Hrsg.: Bundesgütegemeinschaft Kompost e.V., 5. Auflage
- Bundesgütegemeinschaft Kompost e.V., 2010. Hygiene Baumuster-Prüfsystem (HBPS) Kompostierungsanlagen & Vergärungsanlagen. 4. ergänzte und überarbeitete Auflage. Autoren: Prof. Dr. Reinhard Böhm, Universität Hohenheim, Institut für Umwelt- und Tierhygiene, Dr. Werner Philipp, Universität Hohenheim, Institut für Umwelt- und Tierhygiene, Prof. Dr. Werner Bidlingmaier, Bauhaus-Universität Weimar, Ralf Gottschall, Humus & Erden Kontor, Neu Eichenberg, Eleonore Marcinszyn, PlanCoTec, Neu Eichenberg, Köln
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- Stöcklein, 2005. Untersuchungen zur Tenazität von ausgewählten Mikroorganismen in landwirtschaftlichen Biogasanlagen unter besonderer Berücksichtigung von *Campylobacter jejuni* und *Clostridium perfringens*. Berlin Journal-Nr.: 2885 page 93 table 5