



Vitenskapskomiteen for mat og miljø
Postboks 222 Skøyen
0213 OSLO

Trondheim, 03.06.2020

Deres ref.:
[Deres ref.]

Vår ref. (bes oppgitt ved svar):
2020/7600

Saksbehandler:
Guro Sylling

Vurdering av behandlingsmetoder og valideringskriterier for komposterings- og biogassanlegg

Miljødirektoratet viser til samhandlingsavtalen inngått mellom Miljødirektoratet og VKM 31.01.2019, samt belastningsfullmakt for oppdrag til VKM på risikovurdering i 2020, bestiller i fellesskap med Mattilsynet en vurdering av behandlingsmetoder og valideringsmetoder for kompost og biorest basert på organisk avfall opp mot norsk plantehelse og skadelige fremmede organismer.

Fullstendig bestilling på engelsk ligger vedlagt.

Hilsen
Miljødirektoratet

Dette dokumentet er elektronisk godkjent

Bjarte Rambjør Heide
seksjonsleder

Guro Sylling
seniorrådgiver

Tenk miljø - velg digital postkasse fra e-Boks eller Digipost på www.norge.no.

Vitenskapskomiteen for mat og miljø
Postboks 222 Skøyen
0213 Oslo

Vår ref: 2020/23182
Dato: 21.04.2020

Statens tilsyn for planter, fisk, dyr og næringsmidler



Herved oversendes fellesbestilling angående vurdering av behandlingsmetoder og valideringskriterier for komposterings- og biogassanlegg ifht. plantehelserisiko og risiko for spredning av fremmede organismer.

Se nærmere beskrevet bakgrunn og mandat i det felles bestillingsbrevet.

Kontaktperson i Mattilsynet

- Anne Synnøve Bøen, seniorrådgiver, Mattilsynet, Avdeling planter og dyr, Seksjon planter

*Mattilsynet
Hovedkontoret, avdeling planter og dyr, Seksjon Planter*

*Are Tømmerberg Sletta
Seksjonssjef*

Order of an assessment into treatment methods and validation criteria for composting and biogas facilities in relation to plant health risks and the risk of spreading alien organisms.

21.04.2020.

The Norwegian Food Safety Authority and the Norwegian Environment Agency are jointly commissioning an assessment into treatment methods and validation methods for compost and digestate based on organic waste in relation to plant health and the spread of harmful alien organisms in Norway.

Background

The circular economy should encourage the protection and best possible use of resources. Using organic waste as a fertiliser and soil conditioner ensures that nutrients and organic materials in the waste can be put to good use. Treating the waste in a biogas facility also makes it possible to use the energy in such waste. In Norway, a large quantity of organic waste is treated in biogas and composting facilities. According to Statistics Norway (SSB), approximately 80% of all garden and park waste collected in Norway was sent for composting in 2016. In the case of food waste and organic waste from the food industry, close to 50% was treated in biogas facilities while just over 20% was sent for composting in the same year. Compost is used primarily in green spaces and gardens while a large proportion of digestate is used in agriculture.

The reuse of resources found in waste is a development that is being stimulated at several levels. In 2018, the EU adopted a new regulation for the CE-marking of fertiliser products in an effort to promote the circular economy¹. White paper no. 45 (2016–2017: Waste as Resource – Waste Policies and the Circular Economy)² also considers "the need to use resources as effectively as possible, for example by composting organic waste and using it to replace peat in soil products, or by treating food waste in biogas facilities in order to turn it into a high-grade fertiliser that can replace mineral fertilisers". In Norway, a proposal is currently being discussed to phase out the use of peat in growing media³ – a measure which could also lead to an increased use of compost and digestate in growing media and soil conditioners.

It is important to ensure that waste used in the production of compost and digestate is treated in an adequate manner, so as to ensure that the products are free of infectious diseases, alien organisms and other undesired organisms.

Most of the alien organisms we have in Norway are vascular plants and many of these are also known garden plants. These can spread through the environment and negatively impact biodiversity. It is known that garden waste can lead to the spreading of alien organisms whenever it is disposed of at illegal waste dumping sites. It is therefore important to have knowledge on good

¹ https://eur-lex.europa.eu/search.html?DTN=1009&DTA=2019&qid=1574434769342&DTS_DOM=EU_LAW&type=advanced&lang=da&SUBDOM_INIT=LEGISLATION&DTS_SUBDOM=LEGISLATION

² <https://www.regjeringen.no/no/dokumenter/meld.-st.-45-20162017/id2558274/sec1>

³ <https://www.regjeringen.no/contentassets/1b54b01e9382433d800d3f2184e93a4b/utfasing-av-uttak-og-bruk-av-torv-l631781.pdf>

and safe methods on how to transform garden waste containing alien organisms into compost that does not contribute further to the spread of such organisms. Waste from garden centres and other retail outlets selling plants can also contribute to the spread of alien organisms if the waste is not treated adequately.

This request is limited to an assessment of plant pests and harmful alien organisms (hereinafter alien organisms). The survival of infectious diseases harmful to people and animals is considered in separate assessments. Alien organisms can be spread by many different types of organic waste. This can include organisms which are already found in Norway or organisms which are brought in via the import of garden plants or food, for example. In the case of garden waste this can also include soil-dwelling organisms as studies have shown that garden waste contains a considerable proportion of soil⁴. Chopped wood such as wooden pallets is sometimes used as structural materials in composting facilities. It is also known that imported wood packaging can carry undesired organisms⁵.

Current regulations

[The regulation on alien organisms](#) does not stipulate any requirements for a permit to treat garden waste however the fifth chapter of this regulation does make it a requirement to take precautions in connection with any and all activities that may lead to the unintended spread of alien organisms.

[The regulation on fertiliser products](#) regulates plant health risks in fertiliser products which are produced, imported and sold in Norway. According to this regulation it is a requirement that the product must not constitute a risk to plant, animal or human health through its use. Products and their use – including possible misuse – must not entail the risk of spreading infectious diseases to humans, animals or plants. The regulation therefore establishes a requirement that the product must not transmit any diseases but it does not specify how this should be achieved. It is up to the enterprises themselves to treat the materials in such a way that ensures they are free from infectious diseases. Individual enterprises can document their own processes themselves or the industry can come together and establish common industry methods. This has been the case for the windrow composting of animal byproducts (Avfall Norge) and the composting of garden waste (Avfall Norge⁶). A number of the raw materials that are to be assessed in this order are animal byproducts or materials which are processed together with animal byproducts and therefore processed in accordance with the [regulation on animal byproducts](#). This regulation has its own standard methods for the treatment of different materials but is also open to other methods provided that a further specified validation methodology can demonstrate that the treatment method in question is adequate. The common denominator for all of the methods in the regulation on animal byproducts is that they have not (or only to a limited extent) been assessed to ensure they are adequate in relation to plant health risks.

The regulation on fertiliser products is currently under review and a draft for the coming regulation suggests that a clearer requirement should be introduced in relation to the validation of methods. The proposal suggests that new treatment methods should be required to undergo a validation process which demonstrates that the infectious eggs of *Ascaris suum* cannot survive and that a $5\log_{10}$ inactivation of *Salmonella* Senftenberg (775W, H₂S-negative) is achieved. This methodology is used today for both sewage sludge and animal biproducts but there is a lack of knowledge around how the validation method functions in relation to assessing plant health risks.

⁴ Amundsen, CE, Lystad, H. and Vethe, Ø. (2002) Kilder til forurensninger i kompost – kunnskapsstatus. Jordforskrapport 69/02.

⁵

https://www.mattilsynet.no/planter_og_dyrking/tommer_trelast_og_treemallasje/treemallasje/import_av_treemallasje.8474

⁶ <https://www.avfallnorge.no/fagomraader-og-faggrupper/rapporter/beste-praksis-for-kompostering-av-hageavfall-veileder-2016>

According to the [regulation on wild oats](#), it is forbidden to sell grain/seed husks and manure from a property where there are wild oats with the exception of products that are treated so that the germination capacity of any wild oats has been destroyed or which are sold to companies that will destroy the germination capacity of the wild oats as part of their continued processing. The same applies to husks and waste from facilities that take in grains, peas or seeds (such as contracted grain/seed cleaners). Wild oats can be spread by certain raw materials that are processed in biogas and composting facilities such as grain husks from mills or manure⁷. [The regulation on plant health](#) sets forth a general prohibition against spreading quarantine pests and establishes a requirement that the site of production for organic growing media must be free from specified plant pests.

About the assessment

The Norwegian Food Safety Authority will use the report in its supervisory work over companies that produce compost and digestate. The assessment will also provide important input for the regulatory development of several current regulations including regulations on indicator organisms that are used to validate new methods and ensure adequate security with regards to the survival of plant pests.

The Norwegian Environment Agency wants to establish whether the methods used in the composting of garden waste and other types of plant waste today are able to ensure that the finished product does not become a source for the spread of harmful alien organisms. This will form the basis for the Norwegian Environment Agency's guidelines relating to the precautionary provisions in the regulation on alien organisms.

The assessment must encompass organic waste and other materials that are currently treated in biogas and composting facilities, including:

- Garden and park waste (incl. soil)
- Plant waste from garden centres, etc.
- Food waste and waste from the food and animal feed industry (including grain/seed husks and waste from enterprises which package and process potatoes and vegetables⁸)
- Manure
- Bulking agents used in composting facilities
- Husks from contracted grain/seed cleaners for sowing

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<https://www.vkm.no/risikovurderinger/allevurderinger/vurderingavplantehelserisikovedbrukavhusdyrgjodselfraslakterier.4.773639b215c8657f2a4972b6.html>

8

<https://www.vkm.no/risikovurderinger/allevurderinger/spredningavfarligeplanteskadegjorereframottaksvirksomheter.4.3a33d0ea16122420c3939fe5.html>

Terms of reference

1. Assess whether critical operating conditions which are often used in the sanitation stage of composting and biogas facilities is adequate in order to prevent the spreading of plant pests (including viable plant parts and seeds) and harmful alien organisms (hereinafter alien organisms).
 - a. Composting in windrows (> 2.5m) or mattresses where the temperature of the windrow is at least 55 °C for four weeks and the windrow is turned at least three times during this period.
 - i. Also assess a variation of this whereby sanitation is divided into four periods with a temperature of at least 55 °C for at least one week, but where there can be intervals between each of these periods during which temperature is not measured. The material must be turned between each of these four periods.
 - b. Treatment at 70 °C for 60 minutes with a max particle size of 12 mm whereby this is achieved in a composting process or as a pretreatment step before an anaerobic treatment process.
2. If the treatment facility uses other sanitation methods than those listed in point one: Assess whether the following validation methodology is appropriate in order to ensure that the sanitation method being used is adequate in order to prevent the spread of alien organisms in compost and digestate:
 - a. 5log10 inactivation of *Salmonella Senftenberg* (775W, H₂S-negative)
 - b. 5log10 inactivation of *Enterococcus faecalis*
 - c. tests showing that the content of infective eggs from the indicator organism *Ascaris suum* has been reduced to zero.
 - d. Assess whether alternative indicator organisms other than those mentioned in points 2a to 2c could better describe the probability of alien organisms not surviving.
3. Assess the probability that harmful alien organisms will spread further from composting and biogas facilities if the waste is treated in accordance with the requirements set out in points one or two.
4. Identify harmful alien organisms that may result in highly negative consequences if they are spread from composting and biogas facilities.
5. Identify relevant risk-reducing measures and evaluate their effectiveness and feasibility.

Language

The report is to be written in English with an extended summary in Norwegian.

Timeframe

The Norwegian Food Safety Authority would like to receive a response to this order before 03/05/2021.

Current laws and regulations

The Food Act [Matloven]

Regulation on fertiliser products etc of organic origin [Forskrift om gjødselvarer mv. av organisk opphav]

Regulation on plant health [Forskrift om plantehelse]

Regulation on wild oat [Forskrift om floghavre]

Regulation on animal byproducts not intended for consumption [Animaliebiproduktforskriften]

The Nature Diversity Act [Naturmangfoldloven]

Regulation on alien organisms [Forskrift om fremmede organismer]