



Use of fertilizers on organic farms
What requirements should the new biogas plants meet?

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Mere og bedre
ØKOLOGI

Regulation (EU) 2018/848 of the European Parliament and of the Council on organic production and labelling of organic products

Article 5

General principles

(f) the appropriate design and management of biological processes, based on ecological systems and using **natural resources which are internal to the management system**,

(g) the restriction of the use of external inputs; where external inputs are required or the appropriate management practices and methods referred to in point (f) do not exist, the external inputs shall be limited to:

- (i) inputs from organic production;
- (ii) ... natural or naturally-derived substances;**
- (iii) low solubility mineral fertilisers;

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Plant production rules

1.9. Soil management and fertilization in organic production

The fertility and biological activity of the soil shall be maintained and increased:

(a), by the use of multiannual crop rotation including mandatory leguminous crops as the main or cover crop for rotating crops and other green manure crops;

....., **only fertilisers and soil conditioners that have been authorised** pursuant to Article 24 for use in organic production **shall be used**, and only to the extent necessary. **Operators shall keep records of the use of those products**

Regulation (EU) 2018/848 of the European Parliament and of the Council on organic production and labelling of organic products

Article 11

Prohibition of the use of GMOs

1. GMOs, products produced from GMOs, and products produced by GMOs shall not be used in food or feed, or as food, feed, processing aids, plant protection products, fertilisers, soil conditioners, plant reproductive material, micro-organisms or animals in organic production



permitted material

Animal manure, organic or conventional origin
Not from factory farming

Products or by-products of animal origin :

blood meal, hoof meal, horn meal, bone meal, fish meal, meat meal, feather, hair, wool, fur, dairy products

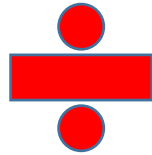
Animal (including wild animals) by-products of category 3 and digestive tract content (category 2), co-digested with authorized materials in the annex

Composted or fermented household waste
Householdings, retailers, catering kitchens

Composted or fermented mixture of vegetable matter
Garden waste, silage

Products and by-products of plant origin
Examples: oilseed cake meal, cocoa husks, malt culms, grass, straw, feed, grain, pectin, glycerin (plant origin)

Be aware about heavy metals residue levels, be aware about GMO prohibition !



Not permitted

Products that are not considered to belong to one of the categories adopted in the approved list

Waste water products/ sludge

Waste/by-products from the medical industry

By-products from producing micro organisms using ingredients that do not appear on the list

But not assessed – dossiers should be prepared to the Commission

Authorizing new products

Organic Denmark and the organic group in the Agriculture & Food Council in DK work together for having an acceptance of the following products without having a separate authorization from the EU:

- Eluat – by-product from producing lactic acid bacteria
- Fertigro - by-product from the medical industry based on pig guts
- Waste from the fish industry that has been silaged with the use of silage agents

Present Danish implementation of EU organic rules

- ✓ Any farm can use 50 kg accessible N/ha from annex 1 with no documentation of demand
- ✓ Additional N can be used provided the farm respect defined requirements to the crop rotation plan

Proposal from Organic Denmark and the organic group in the Agriculture & Food Council in DK for a new implementation model

- ✓ Any use of annex 1 nutrients requires that the farm respects certain crop rotation plans
- ✓ Alternatives to conventional manure are given priority
- ✓ A ceiling of 40 kg accessible N/ha of conventional manure is introduced, BUT using slurry from a biogas plant should give a possibility to raise this ceiling to 60 kg
- ✓ Alternatives to conventional manure is omitted from the calculation of kg conventional used N

Ryccycling products are part of organic farming, conventional manure should not be part of OF – and the platform is a resilient organic crop rotation system

Documentation if the plant shall deliver organic or partial organic nutrients to OF

Status	Type	Ton	Total N kg	Util. %	Util. N kg	Share %
Organic	Cow slurry	10.000	48.000	70	33.600	
Organic	Poultry litter	500	12.225	45	5.501	
Total organic					39.101	67%
Conventional	Pig slurry	5.000	25.750	75	19.313	33%
Total		15.500	85.975	68	58.414	100%

Request for biogas slurry

Yearly export from the field of nutrients through organic harvest						
Products	2015:			2030: 25% organic		
	t N yearly	t P yearly	t K yearly	t N yearly	t P yearly	t K yearly
Export in harvest and products	7.602	1.644	2.077	33.686	7.452	8.783
<i>Export incl. leaching</i>	<i>16.602</i>	<i>1.652</i>	<i>3.157</i>	<i>66.186</i>	<i>7.465</i>	<i>10.733</i>
<i>Supplied conv. manure</i>	<i>5.580</i>	<i>940</i>	<i>4.486</i>	<i>?</i>	<i>?</i>	<i>?</i>



Danish Ministry
of Energy, Utilities
and Climate

DK Energy agreement, June 2018

New biogas and other green gasses

The parties agree to earmark 240m DKK annually in open tenders with price ceilings over a 20-year period to expand the use of biogas and other green gasses; A portion of this funding will be earmarked for organic biogas.

Important with earmarking because of special constraints for biogas plants that should deliver to organic farms:

- More dry material are expected (10 – 20% dry matter, 60 days storage time)
- More variable supplies
- More difficult logistic
- More transport