

Orientation catalog

for the use of biogas additives in organic farming

Published by:

- FiBL Projekte GmbH
- Bundesgütegemeinschaft Kompost e.V.
- Bundesverband der Öko-Kontrollstellen e.V.
- Fachverband Biogas e.V.

1. Background

In recent years, more and more products have come onto the market that are used as additives in the production of biogas. Regulation (EU) 2021/1165 lists fermentation products under [...] fermented mixture of plant material (restriction: product of mixed plant material obtained by [...] anaerobic fermentation in the production of biogas), and biogas digestate containing animal by-products fermented with material of plant or animal origin [...] in Annex II “Authorized fertilizers, soil improvers and nutrients” as permitted products for use in organic farming. However, there are no legal specifications for the use of biogas additives. In practice, there is therefore uncertainty as to which biogas additives are permitted according to the principles of organic farming and whether fermentation residues produced using biogas additives may be used on organic farms.

The aim of this catalog is to provide guidance to stakeholders in the sector and to make recommendations as to which materials used for biogas additives are to be considered permissible or impermissible in organic farming. Thus, this catalog should contribute to a uniform evaluation of biogas additives in organic farming.

2. Permissible and impermissible biogas additives

The following groups of substances have been examined for use in biogas plants regarding the principles of organic farming and subsequently classified as permissible or impermissible biogas additives by weighing up risks and benefits.

Association-specific restrictions are not included in this orientation catalog of permissible and impermissible biogas additives for use in organic farming and must be requested from the associations before biogas additives are used.



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Permissible biogas additives in organic farming with functional examples

No.	Description	Function as biogas additive
1	biochar - pyrolysis product of plant origin	emission reduction
2	algae and algae products	degradation of inhibiting substances, avoidance of floating layers
3	products and by-products of plant origin	flocculants based on renewable raw materials
4	stone meal, clay and clay minerals	emission reduction
5	compost from animal excrement, including poultry manure and composted manure	alternative to enzymes against thickening and clogging
6	composted or fermented mixture of plant material	alternative to anti-thickening and anti-blocking enzymes
7	enzymes	fiber degradation
8	mineral trace nutrients <ul style="list-style-type: none"> • cobalt, copper, molybdenum, manganese, zinc, iron and boron compounds (the relevant restrictions on the content of contaminants in accordance with Regulation (EU) 2019/1009 apply) • nickel and selenium compounds 	support the microbiome in the fermenter; necessary as essential trace elements for microorganisms if not sufficiently added by the substrate
9	calcium and magnesium carbonate	pH regulation
10	microorganisms	increase in methane yield
11	peat	only as a carrier for microorganisms
12	calcium hydroxide	exceptionally, if there is otherwise a risk of breakdown of system, only to increase pH

In all cases where the above-mentioned substances are used, the maximum content limits for the fermentation products must be complied with in accordance with fertilizer regulations. Furthermore, biogas additives may not be used in quantities that are intended to increase the nutrient content of the digestate. In this case, it is no longer assumed that it is used solely as biogas additives but as fermentation substrate. Fermentation substrates for the production of biogas digestates must be mentioned in Annex II of Regulation (EU) 2021/1165 and the restrictions set out therein must be complied with.

Impermissible biogas additives in organic farming with explanation

No.	Description	Explanation
1	synthetic iodine compounds	Iodine is not highly relevant for the microbiome and can be supplied naturally via algae.
2	foam inhibitors containing silicone, e.g. silicone oils	Plant-based alternatives such as frying fats are available.
3	synthetic flocculants	Plant-based alternatives based on renewable sources are available (e.g. from peas).
4	urea and other mineral nitrogen compounds	These are not compatible with the principles of organic farming and are still not considered to be of great relevance.
5	aluminum salts	These accumulate in the soil and can have a long-term toxic effect.

GMOs and products produced from or by GMOs may not be used in food or feed or as food, feed, processing aid, plant protection product, fertilizer, soil conditioner, plant propagating material, micro-organism or animal in organic production (§11, paragraph 1 of Regulation (EU) 2018/848).

3. Use and binding nature of orientation catalog

The current version of the orientation catalog is publicly available and usable. Responsibility for its use lies exclusively with the respective user. The publishers exclude any liability in connection with the use of the orientation catalog. The orientation catalog has not yet been coordinated with the responsible authorities.

4. Further development of the orientation catalog

If substances shall be included in or removed from the orientation catalog, an application can be submitted and sent to Marlene.Milan@fibl.org. A committee of the above-mentioned editors will decide on the application.