

Brief Introduction to Requirements for Organic Crop Production

According to European Regulation (EU) 2018/848, the US National Organic Program (NOP), and JAS

1. What organic agriculture is:

- ❖ Avoids synthetic pesticides, easily soluble mineral fertilizers and genetically modified organisms (GMO)
- ❖ Protects the environment and promotes biodiversity
- ❖ Produces healthy food
- ❖ Recycles nutrients
- ❖ Uses locally adapted methods.

2. Soil fertility and plant nutrition:

- ✓ **Soil fertility** must be increased through the cultivation of legumes, green manure and the promotion of biodiversity, both on the field and under glass and in perennial crops.
- ✓ **Hydroponic** cultivation is not allowed
- ✓ Soil **erosion** must be avoided
- ✓ For annual crops, a wide crop **rotation** must be used, including **legumes** to assure biological nitrogen fixation
- ✓ For perennial crops, wherever possible, legumes should be planted as cover crops
- ✓ **Organic manuring** should be used to maintain soil fertility:

| Type of manure | EU Regulation and JAS | NOP |
|--|-----------------------|---|
| From organic husbandry | Yes | Fresh manure only up to 3 / 4 months before harvest, after this only composted manure may be used |
| From conventional husbandry (factory farming excluded) | Yes | |
| From factory farming | No | |

- ✓ Nitrogen **fertilizers** and superphosphate are not allowed
- ✓ **Rock phosphate, potassium sulphate**, other fertilizers from mined origin and single **trace element** fertilizers can be used in case of proven deficiency
- ✓ Organic and inorganic fertilisation must **not exceed** crop **requirements**
- ✓ Lime (CaCO₃) can and should be applied, when necessary
- ✓ Plant strengtheners and preparations from microorganisms can be used.
- ✓ **Fertilizers, soil improvers and nutrients** that may be used in organic production are regulated in Annex II to Impl. Reg. (EU) 2021/1165.

3. Crop protection:

- ✓ Synthetic herbicides, insecticides, and fungicides are not allowed
- ✓ Pests and plant diseases must be **prevented**, using adapted species and **resistant varieties**, adequate crop **rotations**, and by promoting **natural enemies**
- ✓ After having taken these measures, only those **natural or mineral substances** may be used, which are listed in Annex I to Impl. Reg. (EU) 2021/1165, Annex 2 to JAS Notification 1605, respectively the NOP National List.
- ✓ NOP restricts not only the active substance, but also the **inert ingredients** of allowed pesticides
- ✓ **Weeds** must be controlled by mechanical or thermal means, adequate soil tillage and crop rotation. NOP allows botanical herbicides, provided they comply with the National List.

4. Approval of farm inputs by certifiers

Farm inputs, such as fertilizers and crop protection products, need not be "certified" for being used on organic farms. Here is an overview:

| | Must each input be explicitly approved by the certifier before using it? | Must inputs be "certified" through a document issued to the manufacturer? | Can "input confirmations" issued by other certifiers be recognised by CERES? |
|--------------------|--|---|---|
| Reg. (EU) 2018/848 | No – asking for approval is desirable, but not compulsory | No | Only if the confirmation clearly refers to Reg. (EU) 2018/848, resp. Annex I or II of Reg. (EU) 2021/1165 ¹⁾ |

| | | | |
|-----|--|----|---|
| NOP | Yes | No | Only if the other certifier is accredited by NOP ¹⁾ |
| JAS | No, but the operator must inform CERES about all inputs before using them. | No | No, only if there is a cooperation agreement with the relevant certifier that allows us to use their evaluation results for our own work. ²⁾ |

- 1) In any case, CERES reserves the right not to recognise such confirmations if they are not plausible or trustworthy
2) CERES is expected that the compliance with JAS rules for fertilizers and/or pesticides will be evaluated based on documents submitted by the manufacturer of the respective substance. Normally this includes the filled in declarations 4.3.1.2 and/or 4.3.1.3 of our QM and a technical data sheet.

5. Plant reproductive material:

Regulation (EU) 2018/848 has combined the previous terms seed, seedling, seed potatoes and vegetative propagating material under the term plant reproductive material. Plant reproductive material means plants and all parts of plants, including seeds, at any stage of growth that are capable of, and intended for, producing entire plants;

| | EU Regulation | NOP | JAS |
|---|---|--|-----|
| Origin of seeds and vegetative planting material, resp. Plant reproductive material | Prioritization according to availability applies: 1. Organic plant reproductive material 2. In-conversion plant reproductive material, 3. Conventional undressed plant reproductive material with derogation | Must be organic | |
| Use of conventional seeds and vegetative planting material, resp. Plant reproductive material | Farmer must prove non-availability of organic seeds and vegetative planting material, resp. plant reproductive material. | | |
| In addition: | Farmer must apply for a derogation before sowing or planting, otherwise the crop must be considered conventional. | No such additional procedure | |
| Seeds with chemical dressing | Not allowed. Use will be considered as application of chemicals. Land has to undergo new conversion (see below). | Allowed if untreated seeds / organic seedlings are not available | |

6. Conversion period:

A conventional farm must undergo a **conversion** period before products can be sold as organic. During the conversion time, all rules of organic production must be kept, according to:

| | EU Regulation and JAS | NOP |
|--|--|------------------------------------|
| Annual crops: | 24 months until planting | 36 months until harvest |
| Perennial crops: | 36 months until harvest | 36 months until harvest |
| Beginning of conversion period: | Date of contract with the certifier, or date of first inspection | Last use of prohibited substances |
| External control during conversion: | Required | Not required, farmer keeps records |
| Exceptions: | In case of sufficient proof for non use of prohibited substances during the previous years, conversion period may be reduced ²⁾ | |
| Sale of products during conversion: | From second year of conversion on, products can be labelled as "in conversion to organic farming" ³⁾ | Must be sold as conventional. |

2) Please note that applications for retroactive recognition of areas must be approved by the competent authorities (Reg (EU) 2020/464 Art. 1 Paragraph 2)

3) Products from third countries cannot be imported into the EU with an "in conversion" claim.

7. Cross contamination:

- ✓ NOP and JAS explicitly require **buffer** zones between organic and conventional fields

- ✓ Reg. (EU) 2018/848 requires operators to take "precautionary measures, that should be appropriate and proportionate and are subject to its influence ...in order to reduce the risk of contamination", which includes among others the need of separating organic from conventional fields, whenever there is a risk of pesticide drift.

8. Biodiversity:

- ✓ Organic standards require soil fertility conservation and promotion of natural enemies (see above). Reg. (EU) 2018/848 defines biodiversity as a key element of organic farming. CERES believes that these conditions can't be met on huge monocrop fields. Large fields must be subdivided by **hedgerows**.

9. Records:

- ✓ Before the first inspection takes place, the farm must present an **organic management plan** to the certifier; this plan must be updated annually
- ✓ A **farm diary** must be kept, recording the main activities on each plot
- ✓ Invoices for **purchase** of fertilizers, pesticides, seeds, etc., must be filed
- ✓ **Harvested quantities** must be recorded for each crop
- ✓ The farm needs at least a simple system of **bookkeeping** for sales of organic products
- ✓ In addition, **JAS** requires "**grading**" records: before selling products with the JAS logo, the producer has to double-check and record fulfilment of JAS standards.

10. Knowledge:

- ✓ The farmer must have a **copy** of the respective **standards** and must study them
- ✓ The farmer needs an adequate level of **knowledge** on organic farming rules and technologies.

! *Please be aware that this is only a selection of essential requirements of the organic standards, meant as an introduction. The operator, of course, must learn about and meet all requirements of the respective standard.*