

Production, Processing and Labelling

*International Standard for the use and certification of Demeter,
Biodynamic and related trademarks (as of: Sept. 2023)*

Biodynamic Federation - Demeter International e.V. | Brandschneise 1 | 64295 Darmstadt

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1.Introduction

International Standard for the use and certification of Demeter, Biodynamic and related trademarks – general section

The Standards for the use of Demeter®, Biodynamic® and other related trademarks set out the criteria and framework within which products are certified with these trademarks. In each instance in the standards in which the word, stylised word, logo or trademark ‘Demeter’ appears, Biodynamic® is implied. They provide a legal basis, equally binding on all contracted parties, to assure the quality and integrity of Demeter and biodynamic products.

This document sets out the inspiration for biodynamic production and processing, the principles that inform the standards and the standards themselves. It also outlines the processes by which these standards are developed and implemented by the Biodynamic Federation Demeter International.

All products that carry the Demeter and Biodynamic trademarks are produced and processed according to these standards and are inspected and certified by the responsible authority in the respective country.

Fundamental to all Demeter activity and products is the recognition that as humans we rely on the generosity of the natural world and the collaboration of human activity with this to nourish, care and clothe human beings. These standards articulate how that can be done in a way that supports and works collaboratively with the natural world and mankind.

This document is called the “International Standard for the use and certification of Demeter, Biodynamic and related trademarks” or “International Demeter Biodynamic Standard” or abbreviated “BFDI Standard”.

2. General principles

International Standard for the certification of Demeter, Biodynamic and related trademarks – general section

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2.1. Principles of production

In life processes many diverse forces, which do not originate solely from material interactions, work together. All agricultural measures rely on activating processes which enhance and enliven these natural connections.

The biodynamic method has largely to do with the forming of living interactions and cannot be defined in the way the production methods for an inanimate article can be. Work done by the human hand in caring for the fertility of the soil, the plants, the seeds and propagating material, and the animals, in harmony with local conditions, can develop the farm or garden into a living organism. The huge diversity of the natural world means that agricultural practices that are suitable in one place may be completely inappropriate in another. The inclinations and capabilities of the farmer need to be taken into account for the various farm organisational possibilities which meet these standards. The correct timing of those measures which affect living processes plays an important role. To this belongs in particular also the conscientious and regular use of the biodynamic preparations, and the consideration of cosmic rhythms in plant production and animal husbandry.

Biodynamic work requires that one is strongly connected with the essential nature of the biodynamic method, its principles and aims. To this end it is necessary to live into the natural processes using observation, thinking and perception. An ever-deepening understanding of the connections in nature, based on knowledge, can be gained by constant striving.

Cooperative work in the various advisory associations, public events, magazines, and books are all important sources of aid and support.

The special body of knowledge which is the basis for biodynamic agriculture, insofar as it extends beyond practical and scientific experience, is derived from Rudolf Steiner's "Agricultural Course" of 1924, and the spiritual context of anthroposophy within which this course was held.

The aim is always to practise agriculture in such a manner that structuring the farm as an integrated unit results in productivity and health, and that those inputs needed for production

are generated out of the farm itself. If one however wants to use these standards in such a way as is often the case with laws, that the only concern is with adherence to formalities, or loopholes are sought for economic advantage, one should practise agriculture in some other fashion. It is the task of the respective organisations, with their representatives and the advisory services, to prevent such developments from occurring.

In the end it is important that each grower is increasingly able to act responsibly toward these standards from his/her own knowledge. Each individual can thank the greater biodynamic activity for a part of his/her existence and success, and each local act, even when unseen, contributes to the wider community. Therefore, everyone should at all times act in such a way that the trust of the consumer in the biodynamic method and in Demeter products is confirmed and justified.

Agriculture is the expression of an active formative meeting between mankind and the natural world. The form of the landscape is determined by the needs of people living together in a particular culture. The products, which this agriculture yields, must speak to the being of mankind in order to be able to truly nourish. The keeping of cattle, with the resulting manure production, has been and still is the basis for arable production. Animal husbandry requires feed production, cattle in particular needing roughage, which is an important factor to consider when designing the crop rotation. Plant production is determined by the needs of both man and animal, and requires a conscientious approach to soil husbandry. Locally appropriate management acknowledges the needs of plant and soil, animal and man.

All the measures used on a biodynamically managed enterprise must be evaluated according to holistic principles. In a living totality, it is of real importance not only to balance out the material requirements of the system, but also as Rudolf Steiner explicitly indicated in the Agriculture Course, to balance the depletion of life forces. Conscientious attention to detail in the production, storage and usage of the preparations is of huge importance in this regard.

Spiritual scientific knowledge indicates that components of mineral, plant and animal origin can be metamorphosed by the effects of cosmic/earthly influences during the course of the year, into preparations imbued with forces. When used in the soil, on plants and manures, these preparations contribute to enlivening the earth, stimulating yield and quality in plants, and health, vitality and production of animals on the biodynamic farm.

The preparations should be made on the farm, or in co-operation with other farms, if possible. The plants and animal sheaths for their production should come from the farm, or if possibly from another biodynamically managed enterprise. The experience and knowledge gained to date from observation and experimentation is to be used in their production and usage.

The full effect can only be expected when all the preparations (compost, and spray preparations) are used in manures and for plant care throughout the year using appropriate methods and times (such as stirring for one hour).

These standards indicate intentions for animal husbandry, giving mostly only the minimum requirements.

Domesticated animals, as ensouled beings, are particularly dependent on our care. Daily

management should be carried out in such a way that the animal receives all due care, as well as provision for carrying out its innate behavioural traits. Imbalances at either the physical or soul level need to be recognised in time and carefully rectified. Continuous observant care of the animals is a prerequisite.

Animal husbandry, with the accompanying fodder production is an important part of the agricultural enterprise. With respect to the development of the enterprise, the farm organism cannot do without livestock. This applies to the ruminant in particular. The fodder plants and the well-balanced manure that comes into being because of cattle, contribute considerably through the enlivening of the soil, to the long-term flourishing of a farm. The harmonious co-operation of mankind with the three kingdoms of nature can lead to a living, ensouled farm organism.

"You must know, for instance, that the cosmic influences that come to expression in a plant, come from the interior of the earth and are led upwards. Thus, if a plant especially rich in these cosmic influences is eaten by an animal, the manure that the animal's digestion system provides as a result of consuming such fodder, will be just the right thing for the soil where that plant grows."

Rudolf Steiner

Experience shows that animals which are born and reared on a farm, which cares for their feed and husbandry needs in a loving way, have good health and fertility with a high lifetime production.

Therefore, every effort must be made to organise optimal living conditions for the animals in each given situation, and to bring animals into the farm only from other equally well-run enterprises.

The horns of ruminants have significance for the development of life forces. They provide an opposing balance of forces to the intensive digestion and absorption processes. They are a part of the total being of the cow. In comparison to other animal types, cattle manure has a particularly stimulating effect on soil fertility. The horns also have a large significance as a sheath in the production of the biodynamic preparations.

2.2. Principles of processing

Demeter products are grown and processed according to the Production and Processing Standards for the use of Demeter, Biodynamic® and related trademarks and inspected and certified by the responsible authority in the respective countries.

Aim

Demeter products contribute to the nutrition, care and clothing of mankind. Therefore, the human being stands at the centre of, and provides the yardstick for, whatever actions one may take.

The aim of processing to make Demeter products is the maintenance and, if possible, the enhancement of those qualities originating in the biodynamic method.

Demeter food provides the basis not only for bodily nutrition but also for the soul and spiritual life. This wider view of the effects of food means that the needs of mankind should also be considered on this level.

Basis

The basis of Demeter product quality is the spiritual science of Rudolf Steiner (1861-1925). The ideas and methods of biodynamic agriculture stem from it, as do the tenets of anthroposophical nutrition. Included with the normal quantitative considerations, there is the added qualitative dimension of life, soul and spirit.

Processing

During processing the quality of Demeter products should be maintained and enhanced. Processing is a further refining of the biodynamic qualities of the raw materials.

The processing methods affect the product quality. The aim therefore is to choose methods appropriate to the product and to the overall needs of mankind.

Additives and processing aids should be largely dispensed with. Some are no longer required as high quality biodynamically produced raw materials are used. Others can be replaced through the use of appropriate technologies, or by craftsmanship.

Assessment of Demeter food

Both the ingredients and the processing method affect the quality of food.

For that reason, the assessment of Demeter food is carried out using analytical, microbiological, and sensory tests, as well as methods to depict the life forces (i.e. pictorial methods).

Description of the product

An authentic product is one whose composition and life history is transparent for all traders and consumers to see. A clear declaration is the first step.

Ecological considerations

Production and processing of Demeter products and their trade should be carried out in a manner which is as environmentally as friendly as possible. Responsibility toward mankind and the environment should be in the foreground at each step.

2.3. Principles of Ecological Responsibility

- The production, processing and trade of Demeter products should be carried out in a manner which recognises that we are both responsible for and dependent on the healthy functioning ecosystems which are the foundation of all life on earth.
- Biodynamic farming and processing have the potential to make practical contributions to help resolve the severe multiple crises that are affecting the living world, including climate change, soil degradation, pollution and biodiversity loss. In order to do so Demeter licensees

should take into account their responsibility for local and global ecological systems and the well-being of future generations, when reflecting on their enterprises and making decisions about their activities.

- At a practical level, this requires an appraisal of the use of resources at each step of the Demeter supply chain, with particular attention to the use of fossil fuels and non-renewable resources.

2.3.1. Waste Management

To protect the environment and prevent wasting of resources, all Demeter licensees must have a waste management system. The system must be based on the following order of priorities:

- a) Minimise waste by reducing packaging, using durable materials and equipment, repairing devices instead of buying new ones, etc.
- b) Recycle unavoidable waste, whenever possible. This requires effective separation of different waste fractions (organic, paper, plastic, metal, glass etc.). When there is a choice between easy and difficult to recycle materials, then the easy to recycle must be chosen – even if they are more expensive.
- c) Deposit waste that can neither be avoided nor recycled, in a way that does not pose a risk to surface or underground water bodies, soil, animals or human beings.

Workers must be adequately trained to understand and implement the waste management system. Although a written waste management plan is helpful for larger and complex operations, effective implementation is more important than a written plan.

2.4. Principles of Social Responsibility

Social responsibility and fair working conditions are fundamental principles of the BFDI Standard and Biodynamic production, processing and trade. To underline the importance of social responsibility, the respective minimal requirements are formulated in a separate standard document.

For social and fair aspects of Demeter certification please refer to the Social Responsibility Standard for the certification of Demeter, Biodynamic® and related trademarks.

Federation Licensees (certified by the International Certification Office)

The Social Responsibility Standard will come into force on the 1st January 2024.

2.5. Standards – general

2.5.1. Scope

The International Demeter Biodynamic Standard applies to the production and processing of products from plant and animal origin, distributed and marketed under Demeter, Biodynamic® and related trademarks or other indications of the biodynamic method (the product categories are detailed in the standard that follows). They are approved by delegates of the Members' Assembly of the Biodynamic Federation Demeter International and ratified by the International Biodynamic Association (IBDA), owner of the Demeter trademark rights. The standard becomes valid through publication by the Biodynamic Federation Demeter International and is the basis for Demeter and Biodynamic® certification worldwide.

The first version of this standard was ratified by the Members' Assembly of Demeter-International e.V. on June 25th, 1999 in Sabaudia, Italy.

The BFDI Standard provides a minimum framework for all national Demeter standards in each respective certifying organisation and is therefore compulsory for each licensee in every member country in their most current version. National standards may be stricter in some details or may be formulated in a more far-reaching way. Regulations that are less strict than the international standard are not allowed.

This standard is also an essential element of the following:

- International Statutes of the Biodynamic Federation Demeter International e.V.
- the International Statutes of the collective Demeter trademark
- individual license and certification contracts of the respective certifying organisations
- the financial arrangements of the Biodynamic Federation Demeter International with the respective certifying organisations

They are complemented by the Quality Management Manual and the Standing Orders of BFDI.

This Standard focuses on the biodynamic aspects of production and processing. It cannot and is not intended to replace organic certification.

An existing organic certification is recommended for recognition under this Standard. As there are different requirements for organic certification worldwide, this Standard does not make any concrete specifications as to the type of organic certification. National certifying organisations are authorised to certify all types of entities without an organic certification as a pre-requisite, provided that the legal situation allows for it. If an organisation proceeds in this way, it must be ensured that:

- all organic aspects not covered by this Standard are integrated in the Demeter inspection and certification.

- products are not exported to countries where organic certification is considered as obligatory.

Overriding legal requirements for this standard are:

- All national and international legal regulations regarding production, processing labelling of food, agricultural raw materials, plant protection, breeding, trading and fodder.
- In particular, all relevant legislations for organic agriculture and processing.

Should any national or international law or guidance on processing, production, distribution, storing or labelling contradict this standard, the national or international law must take precedence.

Federation Licensees (certified by the International Certification Office):

A valid organic certification is required for recognition according to this standard. If this puts a licensee or prospective licensee in a very difficult position, they should contact certification@demeter.net.

2.5.2. Standards Committee

The responsibility for interpreting and developing this standard lies with the Standards Committee of the Biodynamic Federation Demeter International, elected every three years by the Members' Assembly.

Further details are regulated in the Quality Management Manual of BFDI.

2.5.3. Structure and System

The BFDI Standard is comprised of a general section which applies to all licensees, members and certifying organisations; specialised sections for specific types of enterprises (production and processing); and even more specific standards which apply to single product categories.

As a whole, this standard works as a positive list. If something is not mentioned, it must be assumed it is not allowed without specific written permission from the national certifier or the Biodynamic Federation Demeter International.

2.6.Certification

2.6.1.General

The right to certify according to this standard requires that the respective certifying organisation have an acknowledgment and accreditation by the Biodynamic Federation Demeter International.

In most countries Demeter certification guarantees a private standard, so state accreditation or state approved accreditation is not a requirement. Nonetheless, national certification schemes must follow common accreditation principles including:

- Transparency
- Impartiality
- Equality of treatment
- Independence from financial influences

For further details concerning the requirements of inspection and certification processes and procedures please contact the national Demeter organisation or the Biodynamic Federation Demeter International.

Details are regulated by the Quality Management Manual of BFDI.

2.6.2.Accreditation Council

The responsibility for ensuring compliance of member countries with the BFDI Standard lies with the Accreditation Council which is elected by the Members' Assembly. In order to do this the Accreditation Council carries out an internal evaluation and accreditation programme.

2.6.3. Quality Assurance

It is the responsibility of every contracted party to guarantee the quality of Demeter products by using optimal operational methods and well thought out measures and processes. Often the regulations governing food demand a management system to ensure internal controls in the business (e.g. Quality management, HACCP).

It is recommended that regular staff training be used to instil good production practice and promote motivation for the biodynamic content and its special character.

2.6.4. Documentation, separation, storage and product flow

Every Demeter licensee must organise their business so that Demeter quality and integrity is always assured and documented, so that the history of each Demeter product (from production through to the final product) is transparent.

At all stages of production and processing there must be protocols in place to ensure that contamination of Demeter products is actively excluded (this includes cleaning products and protocols, separate production runs for Demeter products and other strategies to actively avoid mixing and substitution with uncertified materials). If a business produces conventional and/or organic products as well as Demeter products, the detailed separation protocol (usually that the Demeter production run precedes any others) must be approved by the certification body.

Separate storage areas and clear labelling are required for all raw materials, technical aids, partially processed and fully processed products.

All staff involved in Demeter production must be made aware of the above, and each operator must appoint a quality manager who is responsible for ensuring that these protocols are followed.

2.6.5. Exemptions

The requirements for Demeter production and processing are set out in the International Demeter Biodynamic Standard. It is possible to request an exemption to this standard only in well-justified and documented cases.

A request for an exemption should be made in writing to the national certification body. If it is clear in the standard that this exemption can be granted at a member country level, then the certification body can approve the request. If it is not clear, then the respective certifying organisation will forward the request to the Standards Committee who will consider the request and either grant or deny the exemption.

Under certain circumstances it is also possible for a national certification body to request a country-wide exemption. For more details, please refer to the Quality Management Manual of the Biodynamic Federation Demeter International.

2.7. Residues

This section refers to residues like herbicides and pesticides or farm inputs in general which are not in line with the basic requirements of organic and biodynamic farming. General environmental contaminants, which can endanger the marketability of products irrespective of their organic status, are not included in the following.

- If a raw material or product loses its organic status due to exceeding the permitted maximum levels of an agent, or proven targeted use of non-approved substances, it automatically loses its Demeter certification also.
- Due to the lack of comprehensive legal maximum permitted values for residues relevant only to organic farming, Demeter certifiers treat residue findings according to the so-called BNN orientation value.
- Analysis results with a value higher than 0.01 mg/kg, based on the unprocessed starting product and taking into account the measurement uncertainty and the variance usual for the substance, trigger a search for possible causes.
- If investigations by the respective certifying organisation show that the material was undoubtedly not used intentionally but as a result of unavoidable circumstances such as contaminated sites, drift or storage contamination, the respective certifying organisation may release the product concerned even if the orientation value is exceeded.
- The above does not apply if more than two substances per product or raw material exceed the orientation value.
- The licensee concerned must report any materials exceeding the orientation value to the respective certifying organisation. If he knowingly fails to do so, and the residue findings are discovered at a later stage it is not possible to refer to the treatment as an orientation value.
- The respective certifying organisation must report any exceeded orientation values and the corresponding certification decision to the AC.
- Additional sanctioning in cases of accepted or unaccepted orientation values is regulated in the sanctions' registers of the respective certifying organisation.
- The above only applies if other legal provisions do not prescribe stricter rules.

Federation Licensees (certified by the International Certification Office):

Analyses must be done by a BNN (Bundesverband Naturkost Naturwaren) approved laboratory or other laboratories accepted by the ICO. In every case the laboratory must be accredited (ISO 17025) for the relevant methods, residue and matrix; must cover at least 300 of the most common pesticides; and must have the LOQ (Limit of Qualification) at 0.01 mg/kg or smaller. This allows the use of the BNN Guidance Values as described in the Standard.

The BNN guidance values are also applied to the results of leaf samples or other raw plant material to trigger the search for possible causes.

2.7.1.Spray drift

All producers are obliged to prevent spray drift onto Demeter certified land to the best of their ability. The actual risk of drift can vary greatly depending on the type of farm, region, location and crop.

National certification organisations are entitled to request a risk analysis for individual companies, regions or even the entire certification territory as part of the inspection. The content and scope of the respective analyses are the responsibility of the respective certifying organisation. They are also entitled to request a corresponding action plan on the basis of this analysis.

The action plan will be set up by the respective certifier and may contain both the following elements and measures going beyond them:

- A written agreement is required with conventional neighbours.
- An appropriate buffer zone between certified crops and conventional neighbouring fields. Produce from inside this zone may not be marketed as Demeter. Documentation is required concerning where it is used/sold.
- Harvested produce from the affected field must be tested for residues before sale. Analyses are to be carried out in an accredited laboratory. The costs are to be covered by the operator.
- If possible, hedges should be planted.

In summary:

- The current international standard is the baseline standard for all national Demeter standards. National standards in member country organisations may be stricter in some details or may be formulated in a more far-reaching way but cannot be less strict.
- National certification schemes must follow the principles of impartiality, equality of treatment, transparency and independence from financial influences.
- Compliance with this standard for food and raw materials of agricultural origin in general requires organic certification as a pre-requisite. This organic certification must be to legally defined requirements, for example EU regulation on organic agriculture and processing, the USA's National Organic Program (NOP), Japan Agricultural Standard (JAS) or equivalent. If this is not possible then organic requirements must be integrated into Demeter inspection and certification.
- Product groups which are not covered by organic regulations, for example cosmetics and textiles, may require additional certification or at least organic certification for the raw materials of agricultural origin.
- Changes to this standard must be approved by the Members' Assembly of the Biodynamic Federation Demeter International by an absolute majority.

- The current standard is accompanied by the Statutes, Standing Orders and Quality Management Manual of the Biodynamic Federation Demeter International.
- In well-justified and documented cases exemptions to this standard can be approved according to the procedures outlined above. Exemptions to a national standard (but not the international standard) can be approved by the national certification body. Exemptions to the international standard can be approved by the Standards Committee and the Members' Assembly.

3. Fundamental Requirements

International Standard for the certification of Demeter, Biodynamic® and related trademarks – general section

Version June 2018

Date of revision Sept. 2023

3.1. Composition and quality of Demeter products

3.1.1. Quality of raw material – general definition

The following sections describe the required quality and composition of raw materials for Demeter production and processing. In the following the term “raw material” is used in general but covers all relevant categories for the use on a Demeter enterprise like raw material, ingredients, animal feed, inputs, aids and additives, animals and seeds.

This standard also regulates the processing of Demeter products. Processing methods both allowed and prohibited are detailed in section 3.2, allowed processing aids and additives are detailed in 3.3. Only methods, aids and additives that are expressly listed are allowed.

Please see the labelling section of this standard for the minimum requirements of labelled Demeter products and fodder.

3.1.2. Origin of raw material

Processed Demeter products can only include agricultural products (including animal products) which originate from certified biodynamic farms (with a Demeter contract) which have been processed with Demeter approved aids and additives.

If Demeter quality raw materials are not available, the following priorities must be applied:

- First: Products inspected and certified by recognised organic associations and certification bodies.
- Second: Products with a basic certification for common organic legal norms like the EU-Regulation on organic farming, the National Organic Program (NOP), Japan Agricultural Standard (JAS) or equivalent organic legal norms.

- Third: Uncertified conventional products may only be used if they are authorised for use in the organic regulations as detailed above. (In addition, sea fish may only be used if certified by the Marine Stewardship Council.)

Please refer to the Demeter labelling standard for the additional requirements of labelling when raw materials, additives and aids are included that are not of Demeter quality.

3.1.3. Availability of Demeter raw material

When raw materials are available in Demeter quality they must be used.

The definition of ‘available’ is to be decided by the certification body of the member country by a clear and transparent procedure. This procedure must be publicly available and should consider the following criteria:

- Production – whether there is known Demeter production of the raw material
- Distance – whether transport is proportional to the amount needed
- Quality – other quality parameters, like microbiological stability or product technical specifications
- Price – whether the price of the Demeter raw material is acceptable in proportion to the organic alternative (the certifying body must also take the proportion of the ingredient in the recipe into account).

Please refer to the Demeter labelling standard on additional requirements of labelling when raw materials, additives and aids are included that are not of Demeter quality.

3.1.4. Inclusion of organic partially processed products

If partially processed products are used as ingredients, they must only contain allowed ingredients and additives as defined by these standards.

They must also meet recognised organic standards including allowed ingredients and conventional ingredients as identified above in 3.1.2.

3.1.5. Calculation of the ingredients in Demeter products

The percentage of all Demeter, biodynamic and organic ingredients in any labelled retail product or wholesale ingredient is calculated by weight or fluid volume. Salt, water and mined minerals are excluded.

Time of calculation:

The proportions of Demeter ingredients should be calculated at the final stage of combination.

If the production process is a multistage process, it is at the final stage that the calculation should be made. If the last stage of processing involves both liquids and solids, please refer to calculation of ingredients below.

Calculation by weight:

The total net weight of combined Demeter/biodynamic and organic ingredients at time of combination (excluding salt, minerals and water) divided by the total weight of all combined ingredients (excluding salt, minerals and water).

Calculation by volume:

Fluid volume of all Demeter/biodynamic and organic ingredients (excluding water, salt and minerals) divided by the volume of the finished product (excluding water, salt and minerals).

Calculation if both solid and liquid ingredients are used:

To be based on weight (i.e. combined weight of both solid and liquid Demeter/biodynamic and organic ingredients (excluding water, salt and minerals) divided by combined weight of all ingredients (excluding water, salt and minerals).

Calculation of water:

Natural substances which contain water are taken into account with the following percentages (by weight):

- Vegetable juices with no added water: 100 %
- Concentrated vegetable juices: the concentrate itself counts as the ingredient. Any water used for dilution is not included in the calculation.
- Aqueous extracts: only the plant portion of the extract is taken into account.
- Hydrolates are counted as water in the final calculation, with the fragrance contained in them due to steam distillation being included with the other essential oils.
- Hydro-alcoholic extracts: the plant and alcohol portions are taken into account.

Please note that all ingredients included in Demeter products which will carry the Demeter/Biodynamic trademarks must be labelled with the exact percentages of organic and Demeter ingredients. For further details please refer to the labelling standard.

3.2. Processing methods

This standard cannot include or anticipate every possible method for processing food, therefore the following list is not exhaustive. If a processing method is not included in the list, please contact your certification body for clarification before producing new products.

3.2.1. Approved or restricted approved methods

- All **physical treatments** and methods like washing, cleaning, sieving, filtering (please note restrictions on filtration material), mechanical chopping, mixing, pressing, blanching, decanting, steaming.
- **Extraction** with or without solvents. Permitted solvents are CO₂, water, oils and alcohol, as well as all Demeter ingredients like honey, sugar, vinegar. Please note restrictions on aroma extracts (3.3.).
- **Centrifuging** (not for the production of beer and whey separation).
- **Cool storage**, controlled humidity and atmosphere storage, including **CO₂ and N₂ as cooling agents**.
- **Freeze drying** is only allowed for certain applications and only with an exemption issued by the respective certifying organisation. (EXP I : Chapter 7.21.)
- **Spray drying**.
- Dried milk powder from **horses** and **goats** may be labelled as a Demeter product. Dried milk products from **cows** (e.g. Whole milk powder, skim milk powder, buttermilk powder, whey powder.) is permitted only as an ingredient in processed products.
- Heat treatments may be used when required for microbial stability and shelf life. **Sterilisation** and **pasteurisation** for specific product groups and within the usual boundaries are permitted. High temperature short time (HTST) methods should be used for sterilisation where at all possible.
- **Autoclaving** is permitted (please note restrictions for milk and dairy products).
- **Freezing** (please note restrictions for bread and bakery products and vegetables) is permitted. The freezing process should take place as quickly as possible, using rapid-freeze methods.
- **Ethylene** for the ripening of bananas.
- **Extrusion techniques**
 - Shaping Extrusion is allowed – defined as any kind of gentle, cold pressing of substances through a form which shapes the substance (with upper limits of 75° C and 90 bar) – please see modifying extrusion below which is not allowed.
 - Modifying extrusion is not permitted – defined as high pressure and/or high temperature, whereby not only the physical shape of the product is influenced, but also the specifications and qualities of the original material.
 - The production of puffed cereals must not be labelled with the trademarks, but can follow the guidelines for ingredient labelling (please refer to the Labelling Standard).

- **Smoking** - the wood is burnt either directly in the smoking chamber or outside of it in a suitable facility. Cold and warm smoking processes (< 70°C) are permitted. Permitted smoking agents are:
 - Suitable native wood types (as wood, shavings or sawdust, for example beech, oak and plane trees).
 - Pine cones
 - Herbs
 - Other plants such as juniper, heather, branches, conifer cones and spices
- Bacteria may also be removed by **bactofuging**, but the material that has been separated out may no longer be used.
- **UV-radiation** can be used **only** to disinfect water or air for processing, or for the detection of moulds.

3.2.2. Prohibited methods

- **High frequency drying, chemical moisture extraction** (apart from salt) and **direct drying** by burning fossil fuels.
- Baking in **high frequency infra-red ovens**.
- Baking in foil.
- Processing components and baking trays with **polytetrafluoroethylene** (PTFE) coatings which are subject to heavy abrasive stress by the process and thus show strong abrasion or which are exposed to a temperature of over 250°C. The respective certifying organisation may reserve the right to specifically assess the relevant processes and equipment.
- **High pressure liquid pasteurisation** or high-pressure processing (**HPP**), also called cold pasteurisation or non-thermal pasteurisation.
- **Laser branding** for fresh fruit and vegetables.
- **Chemical preservation** such as surface treatment or fumigation with chemical preservatives.
- **Methyl bromide** to disinfect herbs and spices.
- Any use of **genetically modified organisms** – this includes the products of genetically modified organisms as well as the organisms themselves. Any **aid or additive** which might come from genetically modified organisms (enzymes, starter cultures, mould, yeast etc.) can only be used with written confirmation that this is not the case.
- The use of varieties generated by **cell fusion technology** (cytoplasm or protoplasm). If organic ingredients are used, materials from cell fusion technology must be excluded. This

must be documented by a declaration from the organic source. Until a maximum contamination limit is determined, this standard requires contamination to be less than 3%.

- Irradiation with **ionising radiation** or **x-rays** of Demeter food or ingredients for Demeter products is prohibited (an exemption may be granted by the respective certifying organisation for foreign body detection using x-rays). (EXP II : Chapter 7.21.)
- The use of **modified starch** produced using chemicals or enzymes.
- **‘Liquid’ smoke**.
- **Modifying extrusion** – in which both the physical shape and the qualities of the original material are changed (includes any extrusion above either 75° C and/or 90 bar).
- **Fumigation** of Demeter products to prevent sprouting, or for pest control, and fumigated ingredients (except for CO₂ or N₂ as above).
- **Man-made nanoparticles** - Particles less than 100 nanometers in size must be excluded from farm inputs, ingredients, aids and additives as far as practicable. This standard does not permit the use of nanoparticles in biodynamic agriculture or Demeter products as a precaution due to the uncertainty of their impact on the environment, human and animal health. However due to the pervasiveness of these materials, the lack of labelling requirements and the difficulty of analysis it is also recognised that it may not always be possible to guarantee their absolute exclusion.
- The use of plant seeds treated with **low-energy electrons** is prohibited if alternatives are available.
- **Microencapsulation** in general.

3.3.Aids and additives

Product groups with their abbreviations

| Abr. | Product group | Abr. | Product group |
|------|---|------|--------------------------------|
| BB | Bread and Bakery | FV | Fruits and Vegetables |
| MI | Milk and Milk Products | Oil | Fats and Oils |
| S | Sugar; Sweetening agents, and ice-cream | IMF | Infant Milk Formula |
| MS | Meat and Sausage | HS | Herbs and spices |
| W | Wine | G | Grain products, pasta and tofu |

| Abr. | Product group | Abr. | Product group |
|------|-----------------------------------|------|---|
| A | Alcohol | B | Beer |
| FHS | Food and Health supplements | CFW | Cider, fruit wines and vinegar |
| CCC | Chocolate, Cocoa, Confectionaries | SCN | Soy products, milk and nut drinks |
| C | Coffee | All | All product groups (besides cosmetics) under the precondition that no other restrictions like general law on aids and additives exist |

Tab.: 1 / Table of approved or restricted processing aids and additives for Demeter products

| Additive/processing aid | E-No. | Product group* | Restriction/note |
|--|-------|----------------|--|
| Calcium carbonate CaCO ₃ | E170 | All | As free flowing agent for salt |
| | | W | Acidity regulation |
| | | MI | Only for sour milk cheese |
| | | HS | As anti-caking agent for herbs and spices |
| Magnesium carbonate MgCO ₃ | E504 | All | As anti-caking agent for salt |
| Carbon Dioxide CO ₂ | E290 | All | As inert gas/processing aid for all product groups. |
| | | | CO ₂ as an ingredient in the production of non-alcoholic beverages. |
| Nitrogen N ₂ | E941 | All | As inert gas/processing aid for all product groups. |
| Argon Ar | E938 | All | As inert gas/processing aid for all product groups. |
| Ozone O ₃ | | | Limited to treatment of cool store atmospheres; not to be used on products. |
| Lecithin | E322 | Oil | In organic quality |
| | | FHS | At least organic quality, only from sunflowers, only for capsules and hulls |
| | | SCN | For drinks from nuts |
| | | G | For cereal flakes (not rolled grains), at least in organic quality |

| Additive/processing aid | E-No. | Product group* | Restriction/note |
|---|--|-----------------|---|
| | | CCC | Only for confectionaries, at least in organic quality, not for chocolate |
| Citric acid $C_6H_8O_7$ | E330 | OIL | only for removal of mucilage |
| | | S | Clarification (hydrolysis of starch) |
| | | A | |
| Sodium citrate $Na_3C_6H_5O_7$ | E331 | MS | Only for scalded sausage if it is not possible to process the meat warm. |
| Calcium citrate $Ca_3(C_6H_5O_7)_2$ | E333 | FV | |
| | | MS | Only for scalded sausage if it is not possible to process the meat warm. |
| Tartaric acid $C_4H_6O_6$ | E334 | W | Acidity regulation, processing aid |
| | | FV | |
| Potassium bitartrate $KC_4H_5O_6$ | E336 | W | Tartar stabilisation |
| Agar-Agar | E406 | FV, S, G | Only for spreads based on fruit and sweet milk products e.g. ice-cream |
| | | MI | Only for puddings |
| Carob bean Gum | E410 | All | |
| Guar gum | E412 | All | |
| Gum arabic | E414 | CCC, FHS | |
| Pectin | E440i | BB, MI, FV, FHS | |
| Tartaric acid baking powder $KHCO_3$ / $NaHCO_3$ / $C_4H_6O_6$ $KC_4H_5O_6$ / $NaC_4H_5O_6$ | E500/ E501/ E334/ E335/ E336 | BB | (Sodium or Potassium bicarbonate, with Tartaric acid, sodium or potassium tartrate in any combination); Grain starch is the only permitted carrier. |
| Sodium bicarbonate $NaHCO_3$ | E500 | S | |
| | | SCN | |
| Potassium bicarbonate $KHCO_3$ | E501 | W | Acidity regulation |
| | | FV | Processing aid for the drying of grapes for sultanas |
| Potassium carbonate K_2CO_3 | E501 | BB | For gingerbread only |
| | | CCC | Cocoa production |
| Sodium carbonate | E500 | B | Softening water for brewing |

| Additive/processing aid | E-No. | Product group* | Restriction/note |
|---|-------|----------------|--|
| Na ₂ CO ₃ | | S | Sugar production |
| Magnesium carbonate MgCO ₃ | E504 | FHS | Release and mould release agent |
| Calcium sulphate CaSO ₄ | E516 | SCN | Tofu production |
| | | B | Brewing gypsum |
| Magnesium Chloride MgCl ₂ | E511 | SCN | Tofu production |
| Sodium hydroxide (lye) NaOH | E524 | BB | Lye bakery products only – 4% solution |
| | | S | Sugar production |
| | | G | To adjust the pH in the production of starch |
| Lime water/Calcium hydroxide Ca(OH) ₂ | E526 | S | Sugar production |
| Calcium Chloride CaCl ₂ | E509 | MI | Only for cheese production |
| | | CFW | For the clarification and fining of apple juice for the production of cider/cidre |
| Carbonic acid H ₂ CO ₃ | | S | To precipitate out excess calcium |
| Sulphur SO ₂ | E220 | W | Pure SO ₂ , as gas or in solution, potassium bisulphite, potassium metabisulfite, please note quantitative restrictions according to type of wine |
| | | CFW | SO ₂ and Metabisulfite, 50 mg/l for fruit wine / mead and 100 ml/l for sparkling fruit wines |
| Salt | | All | Sea salt, rock salt or refined salt without the addition of iodine or fluorine. Permitted free flowing agents are Calcium carbonate and Magnesium Carbonate, all other free flowing agents require an exemption by the respective certifying organisation (EXP IV : Chapter 7.19.) |
| Gelatine (at least of organic quality) | | BB | Only for bakery products containing yoghurt, cottage cheese or cream. |
| | | FV | For clarification (cosmetic reasons) of fruit and vegetable juices. |

| Additive/processing aid | E-No. | Product group* | Restriction/note |
|--|-------|----------------------------|---|
| | | All categories except wine | As ingredient, listed on label |
| 'Native' Starch, pre-gelatinised starch | | All | At least organic quality |
| Smoke | | MI MS | From native, untreated wood e.g. Juniper, conifer, also spices. |
| Aroma extracts | | All | Pure essential oils or pure extracts identical with the name giving raw material and made using permitted extracting agents. |
| | | A | Only for liqueurs |
| Bees wax Carnauba wax Vegetable oil | | BB | Non-stick agents |
| Plant waxes | | FHS | Adhesives and bonding agents |
| Rennet | | MI | Also chemically preserved |
| Bees wax Natural hard paraffin wax Micro-crystalline Wax Plastic films | | MI | As a coating only on cheese, uncoloured and without fungicide treatments (also without additives such as short chain polyolefin, polyisobutylene, butyl or cyclic rubber) |
| Lactic acid $C_3H_6O_3$ | | MS | Only for preparation of natural casings |
| | | FV | |
| | | MI | As an acidifier for the production of Mozzarella, microbiologically produced |
| Starter cultures | | All | No genetically engineered cultures (documentation required), not chemically preserved. |
| Ethylene C_2H_4 | | FV | Only for ripening bananas |
| Enzymes All enzymes (including additives and carriers) used must comply with the following requirements: <ul style="list-style-type: none"> ■ GMO-free ■ Free from preservatives (an exemption can be approved, based on a non-availability declaration by 3 suppliers). (EXP III : Chapter 7.21.) | | FV | Enzymes can be used for pressing and clarification of juices. |
| | | S | Grain starch invert sugar production: Isomerase |
| | | SCN | In the production of cereal beverages, enzymes may be used to degum and saccharify the starch |
| | | A | Only for malting cereals and mashing potatoes / corn, restricted to pectinases and amylases only |

| Additive/processing aid | E-No. | Product group* | Restriction/note |
|--|-------|------------------|--|
| <ul style="list-style-type: none"> Glycerine preferably from sustainable and vegetal sources may be added to the enzymes. | | CFW | For the clarification and fining of apple juice for the production of cider/cidre |
| Yeast | | BB, W, A, B, CFW | GMO free |
| Oil | | S | To prevent foaming |
| | | FV | As non-stick agents for dried fruit and vegetables |
| | | A | Vegetable oils to prevent foaming |
| Filtration materials | | All | Asbestos free, Chlorine free |
| Diatomaceous earth | | All | For use in pest control. As an additive or as a processing aid in all product groups, both the non-activated and the activated types can be used. Tests for residues of arsenic must be carried out and the levels must comply with the legal requirements for food. |
| Perlite | E599 | All | |
| Bentonite | | All | |
| Activated carbon (carbon filter) | | All | |
| Plant proteins (e.g. pea protein) | | FV | For cosmetic reasons, clarification and fining, written permission of the certifying body is needed |
| | | W | Pea, potato or wheat protein as fining agent |
| | | CFW | For cosmetic reasons, clarification and fining |
| Tannic acid | | S | Natural origin |
| | | A | |
| Organic Sucrose Ester | | S | Organic quality |
| Sulphuric acid | | S | pH control in sugar production |
| Inulin and other oligosaccharides | | S | In organic quality only for ice-cream |

3.4. Process water

3.4.1. Definition of process water

This section covers the requirements for the treatment of process water in processing plants and in agriculture. Process water in this regard is defined as water used for post-harvest treatment, cleaning, pre-treatment or transport of raw materials or unprocessed final agricultural products. The following measures do not apply to water used in any form for the final processing of products, especially if water is part of the recipe.

3.4.2. Permitted measures – process water

In principle, process water of drinking water quality should be used without additional treatment. As this standard is used worldwide and drinking water should be reserved in many regions primarily for direct human consumption, the following measures are permitted for the treatment of process water:

- All treatments with natural acids like lemon juice concentrate, vinegar or lactic acid are permitted.
- If a certain degree of acidity of the process water cannot be achieved (or is required) or the microbiological load shall be reduced, treatment with citric acid, malic acid and acetic acid is permitted.
- The use of chlorinated drinking water as process water is permitted in regions where drinking water is chlorinated as standard. Where the quality of the available water supply is not reliable, alternative permitted methods must be preferred. However, where such alternative methods are not easily available, additional chlorination with free chlorine up to 2 mg/l for clear water and up to 4 mg/l for turbid water is allowed. If the water is treated immediately before using it, the dosage must be lower. The residual chlorine level in the water in direct contact with Demeter food must not exceed 0.2 to 0.5 mg/l.
- The use of Hydrogen Peroxide (H_2O_2) is permitted.
- UV-Radiation for the treatment of process water is permitted.
- Closed systems are preferred, for recycling in closed systems, ozone treatment or the use of copper ions are allowed.

All the above measures must be used in a way that counteracts the negative effects of polluted water. Use in the sense of an additional preservative effect, prophylactic measure or to extend the product shelf life is not permitted.

3.5.Transport

The transportation of Demeter products and raw material by air freight is generally not permitted. Exemption can be requested from the respective certifying organisation.

Conditions for granting an exemption are at least:

- Written sufficient reasoning why air freight is unavoidable
- CO₂ compensation in at least the same amount (EXP XVII : Chapter 7.21.).

Responsibility for the application of the exemption lies with the licensee organising the flight.

In summary:

- Fundamentally any raw material, ingredients, fodder, animals, seeds, plants, farm inputs, aids and additives for processing and production must originate from Demeter and biodynamic certified enterprises.
- If products are not available from Demeter or biodynamic origin, clear priorities must be applied to sourcing ingredients as detailed in this standard.
- Availability of Demeter raw material, ingredients, fodder, animals, seeds, plants, farm inputs, etc. is decided by the certifying body according to the criteria as defined in this standard.
- The final stage of processing is the point at which proportions of ingredients must be determined.
- The current standard works as a positive list. Some processing methods, ingredients, aids and additives are expressly prohibited, but the prohibitive list is not to be considered exhaustive.
- Please contact the coordinator of the Standards Committee if clarification is needed.

4. Labelling standard

International Standard for the certification of Demeter, Biodynamic® and related trademarks – general section

Version June 2018

Date of revision Sept. 2023

4.1. Introduction

This labelling standard applies to the various biodynamic trademarks world-wide: the new Demeter trademark logo, stylised form of the word Demeter and the Demeter “flower”. As defined in trademark law, every use of the word Demeter, and/or one or more of the registered Demeter trademarks in any form, is seen as use of the trademark. In addition, the use of the word Biodynamic or the implication in the public domain that products are Biodynamic or Demeter is considered to be use of the trademark.

The ownership of the various Biodynamic trademarks world-wide currently lies with individual national owners. The aim is to transfer ownership to a common international body.

The owner of a registered trademark is legally required to protect that trademark from misuse but can entrust other organisations with this task via a license agreement. Therefore, the Demeter trademark can only be used by enterprises or businesses which have a valid contract and license with the relevant Demeter organisation.

4.2. Other legal frameworks

All labels that use the Biodynamic trademarks must also meet all national requirements regarding labelling of food and agricultural products; all current regulations for labelling of organic agricultural products (e.g. EU organic regulation, NOP, etc.); and any other regulations chosen by the respective certifying organisation as basis for certification.

As a specific example, in the case of baby foods based on grain, which are legally required to have added vitamins (under EU regulation 2006/125/EC), the addition must be specified in the ingredients list by including the following sentence: “Containing added vitamins, as legally required.”

Each business must accept responsibility for complying with all legal requirements as indicated above. These legal constraints are not overruled by, contained or interpreted in this standard.

4.3. Trademark use

The Biodynamic trademarks as detailed in 4.1 can only be used to label ingredients, materials and products that meet this standard, by an organisation that has Demeter certification and a valid contract (including license agreement) with an authorised organisation.

- This includes the use of every form of the Demeter trademark, Biodynamic© or the word and term Demeter in product labelling, marketing material or general information (e.g. price lists or documentation of goods).
- In addition, every Demeter product must clearly identify the licensee or contract holder on the label.
- References to the 'biodynamic quality' or 'biodynamic agriculture' on products and marketing material are only possible in combination with Demeter certification and Demeter labelling (trademark or ingredient labelling).
- The use of the word Demeter or the Demeter trademark logo within a business name, manufacturer brand or logo is only possible with written permission from the respective certifying organisation or the Biodynamic Federation Demeter International e.V. Agricultural enterprises can use the word Demeter in combination with the farm name, e.g. Demeter Farm XY. Processing units in combination with an agricultural holding, such as farm bakeries or wineries are considered as processing units. Therefore, the above-mentioned regulations concerning a manufacturer brand and written permission apply.
- Around the Demeter trademark logo, a protective distance must be maintained from texts and logos. Minimal distances, proportions and regulations for very small labels are described in the design manual. The overlapping of the trademark with other graphical elements must always be prevented.

Better and clearer recognition of Demeter products (by consumers in particular) can be achieved if products from the various producers are consistently labelled with the Demeter trademark according to this standard.

The following text may be used on labelling and packaging to put Demeter in context:

- Demeter is the trademark for food from certified biodynamic production”, or
- Demeter is the trademark for food from biodynamic production”.

For further information concerning the calculation of ingredients and their qualities from agricultural and non-agricultural origin, product approval and availability of Demeter raw material, please refer to 2.6. Certification and 3.1. Composition and quality of Demeter products.

4.4. The Demeter and Biodynamic trademarks

4.4.1. The Demeter trademark logo

The majority of the certified products worldwide are produced with the Demeter trademark logo. In most of the certifying organisations it is the only Demeter and Biodynamic trademark in use. The proportions and colours of the logo may not be altered. Further instructions are defined in the BFDI Labelling Manual and under chapter 4.6. and following.





Tab.: 2 / The Demeter Trademark Logo



4.4.2. The flower trademark

Some certifying organisations use exclusively or in addition to the Demeter trademark logo, the so-called flower trademark. The flower trademark may be restricted to certain product categories. Please contact your certifying organisation or refer to the labelling section of your national Standard, whether the use and under which preconditions is possible and trademark protected.

Tab.: 3 / Variations of the flower trademark

| The flower trademark | The flower trademark in combination with ® (Demeter US only) | The flower trademark in combination with certified Biodynamic (Demeter US only) | The flower trademark in combination with certified Biodynamic (Demeter US only) |
|---|---|--|---|
|  |  |  |  |

The flower logo may not be altered in any way (proportion, colours, elements).

BFDI primarily wants to promote the uniform use of the Demeter trademark logo, which is why no specifications have been made here with regard to placement, size and colour specifications of the flower trademark. Corresponding regulations can be found in the national standards of the certifying organisations that offer labelling with the flower.

4.4.3. The certification mark Biodynamic®

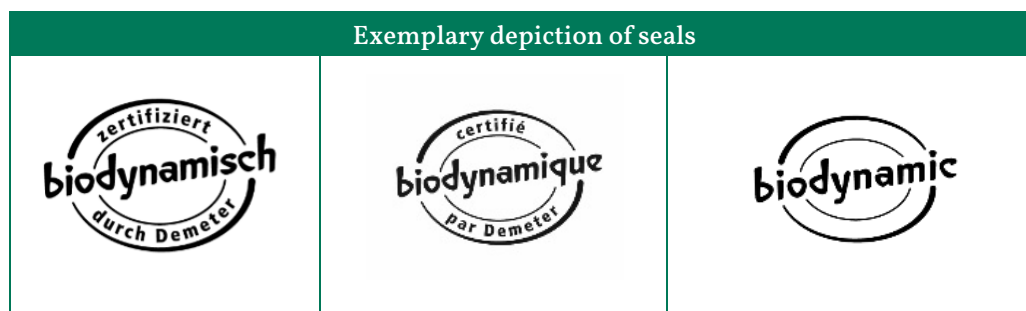
The combination of Biodynamic with the registered trademark symbol - Biodynamic® - may only be used in a country in which the trademark has been legally registered in that form. In the USA, the symbol® must be used. Please contact BFDI or your respective certifying organisation for further information.

In the USA, the term Demeter® can only be used if Biodynamic® or Demeter Certified Biodynamic® also appears somewhere on the label.

4.4.4. The seal

A few certifying organisation offer the possibility to label products under certain preconditions with an alternative certification seal. Up to now no international requirements exist, please contact your respective certifying organisation or refer to your national labelling Standard.

Tab.: 4 / Examples Biodynamic seals



BFDI primarily wants to promote the uniform use of the Demeter trademark logo, which is why no specifications have been made here with regard to placement, size and colour specifications of seals. Corresponding regulations can be found in the national Standards of the certifying organisations that offer labelling with the seal.

4.5. Labelling of products depending on the Demeter share of ingredients

The following is formulated with a focus on the use of the Demeter trademark logo, but must also be applied meaningfully to the use of all other trademarks mentioned under chapter 4.4..

- Single ingredient products can be labelled with the trademarks only if they consist of 100% Demeter ingredients, the 90% and 66% rules do not apply. Single ingredient or mono products consist of only one raw material, such as packaged flour or pulses. Products consisting of one raw material, but different varieties, such as blended coffee or cuvée are not considered as single ingredient products.
- Single ingredient products in conversion to Demeter with full organic status can be labelled with the trademark but additional reference must be made to 'in conversion to Demeter' as a footnote appropriately placed on the label. Alternatively, the trademark logo with the text addition "In conversion" (compare to table below) can be used. It is up to the respective certifying organisation to decide whether to make both versions available or to make one of them mandatory.
- In cases of product labelling of single ingredient products, where placement of a footnote is not possible (e.g. stickers on fruits and vegetables), the use of the trademark with the text addition "in conversion" is mandatory.
- If single ingredient products and ingredients are in conversion to Demeter and are also in conversion to organic, the trademark cannot be used, but a reference may be made to 'in conversion to Demeter' in a footnote appropriately placed on the label.








- Products with multiple ingredients can only be labelled with the trademarks if at least 90% of the ingredients are Demeter certified and all available Demeter ingredients are used (please see section 3.1. for the definition of availability and the additional requirements for ingredients that are not Demeter certified).
- Products with multiple ingredients containing 66-90% Demeter certified ingredients may be labelled with the trademark logo only if an exemption is given by the respective certifying organisation (please see EXP V Chapter 7.21). For application details please refer to the statutes or standards of the respective certifying organisation.
- As an alternative to the exemption labelling (only used in the USA at the moment) - Products which contain 70% or more Demeter certified ingredients, but less than 90%, generally may be labelled in the “made with Demeter certified ingredients” category. For all products in this category, the label may list no more than 3 food groups and all ingredients within a group must be Demeter certified. Agricultural ingredients used in the remaining 30% must be certified organic at a minimum. A product with a “made with” statement may not display the trademarks anywhere on the primary display panel of such a product. Consult with Demeter US or the Demeter US labelling Standard for further details.
- Products containing 10-66% Demeter certified ingredients cannot be labelled with the trademark logo, but ingredient labelling with the word ‘Demeter’ or “Biodynamic” in the sense of labelling in the list of ingredients (see also certification status of ingredients in the ingredients’ list) is allowed.
- In the United States only, products containing 10-50% Demeter/Biodynamic ingredients can be identified with ingredient labelling only on the back or side panel. Products containing 50-70% Demeter/Biodynamic ingredients can be identified in the ingredient labelling along with a narrative about the Demeter Certified Biodynamic ingredient on the back or side panel; the narrative may describe the Demeter/Biodynamic ingredient and must not infer that the product is a “Demeter Certified Biodynamic” product or a “Made with Demeter Certified Biodynamic (ingredient)” product. The product must also be verified to meet the USA National Organic Program requirements for Organic labelling. The trademarks cannot be used anywhere on the label. Ingredient labelling requires Demeter certification of the processing facility.

In all products with less than 100 % Demeter certified ingredients, the certification status of every ingredient must be clearly indicated in the ingredient list, by using asterisk labelling (*organic, **Demeter or **biodynamic, **organic, ***non-organic)

- If a product contains any ingredient with mixed levels of certification (Demeter and organic) it can only be indicated with organic.
- Sea fish and sea food caught according to the requirements of the Marine Stewardship Council (MSC), may be used as ingredient in Demeter products. The finished product must

contain a minimum of 70% Demeter certified ingredients. For products with a lower Demeter share the general rules for ingredient labelling may be applied.

Tab.: 5 / Overview Demeter share ingredients list

| Demeter amount | Labelling | Ingredients' list |
|----------------|---|--|
| 100% |  | Single ingredient products do not require an ingredients list and therefore ingredient labelling is not required. |
| 90-100% |  | Ingredients must be clearly identified as to % and certification status. |
| 66-90% |  | Trademark may only be used with an exemption given by the respective certifying organisation. Ingredients must be clearly identified as to % and certification status |
| 10-66% |  | No use of the trademark is allowed, however individual Demeter certified ingredients may be labelled as Demeter in the ingredients' list. |
| 100 % |  | Single ingredient products in conversion with full organic status, as an alternative to labelling with a footnote |
| 90 – 100 % |  | For mixed products. Ingredients must be clearly identified as to percentage and certification status. It is up to the respective certifying organisation to decide whether to make this version available or even to make it mandatory. |
| 66 – 90 % |  | For mixed products. Trademark may only be used with an exemption granted by the certifying organisation. Ingredients must be clearly identified as to percentage and certification status. It is up to the respective certifying organisation to decide whether to make this version available or even to make it mandatory. |

For further information concerning the calculation of ingredients and their qualities from agricultural and non-agricultural origin, product approval and availability of Demeter raw material, please refer to 2.6. Certification and 3.1. Composition and quality of Demeter products.

4.6. Standard placement on products – trademark logo

The Demeter trademark logo must be used as a co-brand (the Demeter trademark logo is used in conjunction with the trademark of the enterprise bringing the product onto the market).

The following must be observed:

- The Demeter trademark logo must be placed in the upper third of the front packaging, preferably centred along the upper edge.
- The size should be between 20mm and 50mm width (respective certifying organisation may approve use outside of these limits).
- The Demeter trademark logo must always be clearly recognisable.
- The licensee must be clearly identified on the packaging, this must include the name and address.
- The Demeter trademark logo may also be used on a collar label for bottled products as long as the Demeter logo is prominent relative to other information on the collar.
- If there is any unclarity, the respective Demeter organisation may approve placement of the logo.

Around the Demeter trademark logo, a protective distance must be maintained from texts and logos. Minimal distances, proportions and regulations for very small labels are described in the design manual. The overlapping of the trademark with other graphical elements must always be prevented. Further instructions about how to treat the logo are defined in the BFDI Labelling Manual.

4.6.1. Form and colour scheme




The following is only a general overview of the use of the Demeter logo on outer packaging and advertising material. Detailed guidelines and recommendations for the appropriate use of the trademark, suggested wording and statements about the trademark appearance can be found in the official Labelling Manual of BFDI on request from the federation or national versions from the respective certifying organisation. Official graphic files for further use can be found at <https://www.demeter.net/certification/labelling-demeter/>

- The form and proportions of the trademark logo may not be changed or altered in any way.
- If the trademark logo is not clearly differentiated from the background, a graphic solution must be found to guarantee an appropriate contrast. Details are to be found in the Labelling Manual.

- If the trademark logo is used on circular labels, the trademark may not be adjusted to the curve. The distance between the upper end of the trademark logo and the curved edge of the label has to be a distance the size of the letter “d” of the trademark.

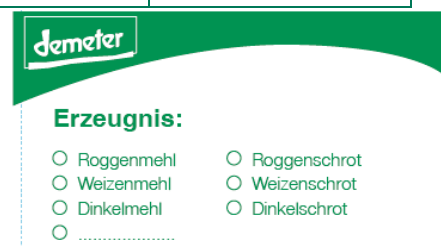
If the label or packaging for a Demeter product is printed in more than one colour, the following colour scheme is to be adhered to:

Tab.: 6 / Colour scheme for the normal usage of the Demeter trademark logo

| Trademark log | Colour | Description | |
|---|--------------------------------|--|--------------------|
|  | Trademark stylised word: white | White (transparent on a pale background) | |
|  | Background field: orange | Colour Space/Version | Colour Code |
| | | CMYK coated | 0/65/100/0 |
| | | CMYK uncoated | 0/57/100/0 |
| | | Pantone coated | 158C |
| | | Pantone uncoated | 144U |
| | | RAL | 2011 |
| | | RGB | 239-112-025 |
|  | Accenting line: green | Colour Space/Version | Colour Code |
| | | CMYK coated | 100/0/70/30 |
| | | CMYK uncoated | 100/0/80/23 |
| | | Pantone coated | 336C |
| | | Pantone uncoated | 3288U |
| | | RAL | 6016 |
| | | RGB | 000-120-087 |
| | | HEX | #007857 |

Monochrome printing

If a single colour is used, use of the trademark logo is allowed in that colour with the approval of the respective certifying organisation.



If trademark logo is not clearly differentiated from the background, then the edges of the logo must be identified with an additional line.

Coloured label with monochrome Demeter logo

If for important reasons the Demeter logo on the front cannot be used in the original colours according to the Table above, it can be used in monochrome gold, silver or black and white (including in grey scale). The decision lies with the respective certifying organisation. However, the Demeter logo in the original colours must also be used on the back label of the product, in order to achieve high recognition value among consumers. The position of the secondary placement on the back can be freely chosen. The minimum size of 2 cm still applies.

4.7. Text additions to the trademark logo

Text additions to the trademark logo are not permitted, with the exception of official marketing claims in connection with international branding concepts approved by BFDI.

The use of the trademark without reference to a product, by organisations or single persons not involved in certification (for example national or international advisory or training organisations) is not governed by this labelling section. The use of the trademark shall be regulated by trademark contracts between those parties and the respective trademark owner.

Tab.: 7 / Examples for text additions to the trademark logo

| Example marketing campaign | Example use outside of the scope of certification |
|---|--|
|  |  |

4.8. Labelling of specific product groups

4.8.1. Labelling of alcoholic spirits

Alcoholic spirits can be labelled with the Demeter trademarks in the same way as Demeter wine (please see chapter below)

4.8.2. Labelling of wine

- If wine is made from Demeter certified grapes **and** meets the BFDI wine standard, it may be labelled with the Demeter trademark logo as indicated above. In addition, the logo may be placed **anywhere** on the front, back or collar and may appear in gold, silver or black and white (if preferred to the original colour scheme).
- If Demeter certified grapes are processed by a Demeter licence to wine using the EU organic wine standards or to standards recognised as equivalent they may be labelled as 'Wine made from Demeter Grapes' or 'Wine made from biodynamic grapes' under the following conditions:
 - The trademarks must not be used and there must be no implication that the wine is Demeter certified.
 - The mention of Demeter and/or biodynamic is restricted to the back label only, using the wording 'Wine made from Demeter grapes' or 'Wine made from biodynamic grapes' in the same type face and font as the rest of the text. Other references to the biodynamic method of grape production are permitted only on the back label in the same type face and font as the rest of the text.

4.8.3. Labelling of other products with alcoholic ingredients

Demeter products with alcoholic ingredients (whether Demeter or organic) in which the alcoholic ingredient is not part of name of the product require additional labelling "product contains alcohol" or similar. Labelling as part of the ingredients list is **not** sufficient. This is especially true for products which are not normally associated with alcoholic ingredients like sweets or bakery products.

4.8.4. Labelling of Demeter cosmetics

- Products containing at least **90%** Demeter certified ingredients (or between 66-90% Demeter ingredients with an exemption) may be labelled according to the general requirements of this labelling standard, if the products meet the standard for cosmetics and personal care products and all products of non-agricultural origin are listed in 7.15.7..
- For products containing less than 66% Demeter ingredients, ingredients may be identified as Demeter or biodynamic only with reference to the raw materials and only if it is **not** implied that the product as a whole is of Demeter/biodynamic quality or meets the BFDI Cosmetics Standard.
- The words Demeter or biodynamic may only be used on the back and/or side panel labelling when:

- The product meets an “organic” or “natural” standard approved* by the Biodynamic Federation Demeter International and is labelled as such, or
 - The product meets this standard with the exception of one or more ingredients of non-agricultural origin permitted in a “natural” standard as mentioned above, and
 - The font style and size for use of Demeter or biodynamic is similar to the text used on the information panel (no use of the Demeter logo).
 - The certified biodynamic ingredients in the product are indicated either on the packaging or on the insert with the product and in the internet via a link from the product
- Reference to Demeter/biodynamic agriculture and raw materials in relation to product(s) which contain less than 66% of Demeter/biodynamic ingredients in the total formulation may only be made as specified above. Internet and other non-point-of-sale information specific to product(s) must also be clear that the product(s) referenced are not Demeter/biodynamic certified as a whole.

** please see the standard for the certification of cosmetics and personal care products.*

4.8.5. Labelling of Demeter textiles

- The labelling of textiles from Demeter wool and other Demeter fibres, which have been produced according to the Demeter processing standard, can be labelled with the Demeter trademark logo if the general requirements are met. Indicating the use of Demeter raw materials must comply with the relevant section of the labelling standard.

Ingredient labelling - Demeter or biodynamic may be used only on the back and/or side panel labelling when:

- The product meets an “organic” or “natural” standard approved* by Demeter-International e.g. GOTS and be labelled as such, or
- The product meets the Demeter-International textile standard with the exception of one or more ingredients/processes permitted in a “natural” standard mentioned above, and
- Font style and size for use of Demeter or biodynamic is similar to the text used on the information panel (no use of the Demeter logo)
- The certified biodynamic ingredients in the product are indicated either on the packaging/labelling or on the insert with the product and on the internet via a link from the product.
- Reference to Demeter/biodynamic agriculture and raw materials in relation to product(s) may only be made as specified above. Internet and other non-point-of-sale information specific to product(s) must also be clear that the product(s) referenced are not Demeter/biodynamic.

** Approval requires the standard in question to have:*

- Minimum organic ingredient content of 50% of the agricultural ingredients
- No ingredients in parallel (Demeter with organic/conventional)
- No GMO
- No nanoparticles

The licensee shall apply for approval by supplying proof that the above requirements are met by the standard in question, and they are certified to that standard.

The Demeter/Biodynamic trademark logos cannot be used anywhere on the product label.

4.8.6. Labelling of products from biodynamic breeding

Products which meet the requirements for biodynamic breeding as set out in section 6.1.10. of this standard can be labelled as follows:

- With the Demeter trademarks in line with the general requirements of this labelling standard.
- With a text reference to biodynamic e.g. “biodynamically cultivated variety”, “biodynamically grown varieties” or “from biodynamic breeding” within the information text on the product.
- With a combination of the ‘Bioverita’ logo and a reference to biodynamic breeding.

In order to label with either a reference to biodynamic breeding alone or in combination with the ‘Bioverita’ logo the following minimum requirements apply:

- Labelled seeds – 100% must meet the standard for biodynamic breeding.
- Single ingredient products, loose and unprocessed – 100% must meet the standard for biodynamic breeding.
- Single ingredient products which are sold packed and/or processed – at least 66% raw materials must meet the standard for biodynamic breeding (the proportions are calculated using the yearly average, not per package).
- Multi-ingredient products – at least 50% raw materials must meet the standard for biodynamic breeding (the proportions are calculated using the yearly average, not per package).

The requirements outlined above also apply to products and raw materials from seeds on Demeter farms that were multiplied on an organic farm for the purpose of seed production.

Tab.: 8 / Examples of the 'Bioverita' logo in combination with text



4.8.7. Labelling of layer hen products

The labels and labelling of products from Demeter layer hen management using the Demeter trademark logo together with a description like “the brothers of the layer hens have been reared” or similar formulations is only allowed if the brothers of the layer hens have been reared on a Demeter enterprise.

4.8.8. Labelling of beekeeping products

The labels and labelling of packaging of products from Demeter bee management using the Demeter trademark logo must meet the general requirements of the labelling standard.

In addition, the following text or similar wording must be included on labels: “The deciding factor in Demeter bee management is the way that the bees are cared for. Since bees have a large area over which they forage it is not possible to expect them primarily to work land which has been managed to Demeter standards”.

4.8.9. Labelling of cannabis products

Labelling for cannabis products under the Demeter trademark is possible with restrictions:

- Products for recreational use cannot be labelled with the trademarks.
- Products for medicinal use with an THC content higher than 0.5 % cannot be labelled with the trademarks.
- Products with a CBD content within the respective legal requirements and a THC content below 0.5 % can be labelled with the trademarks.

The labelling option refers to both the labelling of the raw material in the form of dried blossoms and processed products such as cosmetics and oils, provided that the processing Standard - general part and the respective product section - is complied with.

Accompanying legal norms such as certifiability under organic law or labelling of medical products with organic claims may vary worldwide and may further restrict the use of the trademarks. The respective national certification organisation is responsible for taking these legal norms into account in the certification process.

In summary:

- This standard applies to the Biodynamic trademarks world-wide, including the Demeter trademark, the stylised word Demeter and the Demeter flower. It also includes the use of the word Demeter and the use of the word biodynamic in product and ingredient labelling as well as marketing material and related information (e.g. price lists, documentation of goods).
- Use of the trademark requires a license agreement and certification contract with the respective certifying organisation.
- Every product must have clear identification of the licensee, including a name and address.
- There are clear guidelines for the size, proportion, colour and placement of the trademarks. These vary for certain product groups.
- Consumer information on all packaging must be clear and comprehensible including the quality and proportions of all Demeter ingredients.

5. Pest control and cleaning of storage and production facilities

International Standard for the certification of Demeter, Biodynamic® and related trademarks – general section

Version June 2018

Date of revision Sept. 2023

5.1. Introduction

Both pest control and the use of cleaning agents in processing equipment and production units are largely or completely unregulated by most organic regulations. For this reason, unlike other areas of this standard, it cannot be taken for granted that these aspects are regulated by the organic legislation. A Standard that can meet both the legitimate concerns of food hygiene and safety, as well as the many areas of use and product groups, while minimising the impact on life and the environment, is currently beyond the limits of what is feasible under this standard and its subsequent inspection.

For this reason, the following is only an exclusion of the most invasive methods and means in each area. The operational optimisation of cleaning and disposal management as well as pest control from an ecological point of view with minimised effects on Demeter products and the environment is the central responsibility of every Demeter licensee.

5.2. Scope

This Directive is not limited to processors only, but refers to indoor and outdoor storage areas in processing, trade and production, as well as production facilities and facilities in processors and agricultural processing such as cheese processing and milking parlours.

5.3. Preventative measures

Both in pest control and in the use of detergents, prophylactic measures and good industrial hygiene must always have priority to prevent the emergence of pests and pathogenic

microorganisms than to reduce the resulting pressure with the subsequent use of suppression measures. Both areas should be dealt with using in-house management systems and constantly further developed. Structural requirements, microbiological load of the processed raw material and personal hygiene of the employees require constant optimisation and training.

HACCP concepts should address both areas and require responsible and trained staff.

Wherever possible, HACCP concepts should be designed so that reduction is based on several complementary but low hurdles and not on a few invasive ones.

5.4. Pest control

5.4.1. Treatment records

Many processors outsource pest control to professional companies. These companies must keep a log-book of their activities and findings which shall be available at each inspection. The licensee must have a contract with the pest control company confirming that the company will comply with this standard.

If pest control is not outsourced, all measures using pest control agents need to be protocolled by the licensee (date, material, dosage, location of bait stations, training on their use).

5.4.2. Permitted measures – storage rooms

The following measures may be used in storage rooms without product contact:

- Traps (catch-alls, traps with bait, traps with anti-coagulant poison baits for rodents, UV-traps, traps with alcohol, sticky papers, inert atmospheres)
- Natural oils with a repelling effect (Citrus, linseed, animal oils)
- Ultra sound generators
- Parasitic or predator insects (e.g. *Lariophagus*)
- Diatomaceous earth
- Pyrethrum (without Piperonylbutoxide). The respective certifying organisation can issue an exemption if PBO is present in materials legally required to be used. (EXP VII : Chapter 7.21.)
- *Bacillus thuringiensis*

5.4.3. Approved measures – raw materials

The following measures may be used both in storerooms and in direct contact with raw materials and products:

- Washing with water or steam
- Sieving or beating
- Aspiration
- Compressed air - disinfestation
- Thermal measures (Cooling, blast freezing, heat)
- Inert gas treatment e.g. with nitrogen or carbon dioxide.

5.4.4. Other measures

If the pest control measures described above are not sufficient and the use of other chemical or biotechnical means such as toxic plant extracts, neurotoxins or hormone compounds is required, this can only be done in empty rooms and under subsequent conditions. The measures are to be requested in advance from the respective certifying organisation (EXP VIII : Chapter 7.21.), the reasons given include at least:

- Advice and substantiation by a professional in pest control.
- Description and specification of means and materials.
- Description of the measures to avoid contamination of products after reusing the storage
- Measures to improve prevention in order to avoid repetition.

5.5. Cleaning agents

5.5.1. Cleaning agents - basics

Products authorised for cleaning and disinfection of buildings and installations (e.g. equipment and utensils).

The use of cleaning agents cannot be adequately reflected in control and certification due to the different fields of application, the numerous product groups and the priority of product safety. General guidelines in the sense of a positive list are not possible under this guideline. In addition to the use of cleaning agents with the lowest possible environmental effects in production, application and production, a responsible handling of cleaning agents used in the

company must be observed.

The most reasonable use possible can only be described in a detailed management system taking into account the specific circumstances and risks of each operation. Measures should be adapted to the respective risk. When hazardous substances need to be used in sensitive areas, the focus must be on protecting the user, proper disposal of the effluents, and avoiding product contamination.

Please notice, especially for wine there are some further requirements in the section for the processing of wine listed only.

5.5.2. Recommended cleaning agents

- Potassium and sodium soap
- Milk of lime
- Lime
- Quicklime
- Caustic soda
- Ionised water
- Caustic potash
- Hydrogen peroxide
- Natural essences of plants
- Citric, peracetic, formic, lactic, oxalic and acetic acids
- Alcohol
- Nitric acid (dairy equipment)
- Phosphoric acid (dairy equipment)
- Sodium carbonate
- Ozone
- Sulphur

5.5.3. Permitted cleaning agents

In principle, all cleaning products are authorised, with the exception of those listed under 5.5.4, insofar as no other higher-ranking legal directives exclude these. This applies on the condition that measures described under 5.5.2 are not detectable in the product. Product

contamination, even with approved agents, may lead to decertification of the product by the respective certifying organisation.

5.5.4. Non-permitted cleaning agents

Agents with the following active ingredients are not permitted:

- QAC (quaternary ammonium compounds)
- Active chlorine (the respective certifying organisation may grant an exemption in meat processing) (EXP IX : Chapter 7.21.)
- Complexing agent EDTA (ethylenediaminetetraacetic acid) and its salts
- Formaldehyde

6. Production

International Standard for the certification of Demeter, Biodynamic® and related trademarks – production

Version June 2018

Date of revision Sept 2023

6.1. Arable and Plant Production

"To fertilise means to enliven the soil". This dictum leads us towards a method of fertility building that has its origins in the connections between the life spheres of plant and animal. In any fertility programme, the appropriate use of the biodynamic preparations is of prime importance.

6.1.1. Scope

Arable and plant production covers all agricultural crops and plants including perennial and ornamental plants usually grown on organically managed enterprises.

6.1.2. Seed and propagation material

6.1.2.1. General principles – seed and propagation material

Seed, propagation and plant material of genetically modified varieties (GMO) including protoplasm and cytoplasm fusion techniques may not be multiplied or sown on Demeter enterprises.

The use of seed, propagation and plant material produced by new plant breeding techniques (NPBTs) is prohibited in production on a Demeter enterprise. This comprises all NPBTs considered by IFOAM EU as techniques of genetic modification leading to GMOs according to the existing EU legal definition. These are:

- Oligonucleotide directed mutagenesis (ODM)
- Zinc finger nuclease technology types I to III (ZFN-I, ZFN-II, ZFN-III)

- CRISPR/Cas
- Meganucleases
- Cisgenesis
- Grafting on a transgene rootstock
- Agro-infiltration
- RNA-dependent DNA methylation (RdDM)
- Reverse Breeding
- Synthetic Genomics

Seed, propagation and plant material must originate preferably from biodynamic agriculture, or else from organic agriculture, if biodynamic is unavailable.

The use of plant seeds treated with low-energy electrons is prohibited if alternative treatment according to this standard is available.

6.1.2.2. Seeds and Seed potatoes

Seeds and seed potatoes must originate preferably from biodynamic agriculture, or else from organic agriculture, if biodynamic seed is unavailable.

Seeds and seed potatoes from biodynamic agriculture or from organic agriculture must not be treated with synthetic chemical seed treatment agents at all, including in storage. Irradiation with ionising radiation is prohibited.

If seeds or seed potatoes are unavailable in biodynamic or organic quality, untreated material of conventional origin may be used after approval by the respective certifying organisation. (APP 1: see Appendix 7)

Hybrids of cereals, with the exception of corn (*Zea mays*), are prohibited for the production of feed and food. Seeds and plant material produced using protoplasm and cytoplasm fusion techniques are prohibited.

6.1.2.3. Propagation material for tree crops and perennial crops

If propagation material for tree crops and perennial crops is unavailable in biodynamic or organic quality, propagation material of conventional origin may be used after approval of the respective certifying organisation (APP 1: see Appendix 7). Post-harvest treatment with chemical synthetic pesticides (e.g. disinfectants) is not permitted.

Imports of no more than two trees per year per farm are exempt.

6.1.3. Fertilisation – General

One of the main objectives of biodynamic agriculture is to bring the soil to life. This includes maintaining and increasing the natural fertility of the soil through appropriate cultivation, animal husbandry and fertilisation measures. The aim of fertilisation is primarily to build up humus and thereby create soil fertility from which plant life is nourished, not to fertilise the plant directly. For these reasons, the farm's own fertilisers, manure and compost are of utmost importance in biodynamic agriculture.

The storage capacity of all manures must be adequate in a way, that nutrient losses are minimised and an uncontrolled entry into the direct environment near the storage is prevented.

The basis of fertilisation for all farm types is composting and stable manure, prepared with the compost preparations. On extensive pastoral farms the respective certifying organisation can approve a fertiliser regime that does not include compost if the compost preparations reach all the land through an alternative process every year (e.g. via cow pat preparation). For details compare to chapter 6.2. Biodynamic Preparations.

The following chapters on the minimum requirements for fertilisation distinguish between the different types of farm:

- Market gardens/horticulture,
- Perennials/orcharding
- Arable farming incl. field vegetables

and the different types of fertilisation:

- Farmyard manure (like stable manure, compost, liquid manures from plants – compare to Appendix 4 /1.)
- Imported farmyard manure (like farmyard manure, but brought in from other biodynamic, organic or non-organic farms – compare to Appendix 4/1. and 2.)
- Recycled manure (like composted municipal green waste or substrate from biogas extraction – compare to Appendix 4/1. and 2.)
- Commercial fertilisers (any material meant for fertilization from organic and/or mineral origin and not covered by the three categories above, is considered as commercial fertiliser – compare to Appendix 4/2. and 3.)

The following represents the international minimum requirements, national certifying organisations are encouraged to develop additional requirements that take into account regional specificities, traditional farming methods and farming systems.

Furthermore, the intensity of fertilisation must be adapted to the site and climatic conditions.

6.1.3.1.Fertilisation – amounts, farm types and sources

Nutrient management must meet two essential goals. It must be adapted to the local conditions as well as to the farm type and the nutrient input and output must be balanced. Nitrogen input through green manure is not taken into account in a nitrogen balance.

Certifying organisation may demand a nitrogen balance to substantiate the higher nitrogen input for market gardens and perennials (in the (sub)tropics) (up to 170 kg N/ha/y).

The nitrogen supply is used here as an orientation value, subsequent values are to be assumed within the scope of the inspection and certification with a margin of error of 5 %.

In order not to make the nitrogen and phosphorus balancing unnecessarily complicated, especially for small farms, only the share of commercial organic fertilisers is considered for the phosphorus input (in contrast to the nitrogen input).

■ **Arable farming** - The total amount of nitrogen and phosphorus applied from all types of fertilisers used may not exceed the amount that would be produced by those animals which the farm could support from its own fodder production. This corresponds to a nitrogen input not exceeding 112 kg N/ha/yr (and as an orientation 43 kg P/ha/yr) based on the total area of the farm. If own farmyard manure (own manure or based on a fodder-manure-cooperation) is not sufficient to cover the Nitrogen demand, other fertilisers may be imported, hereby the following must be taken into account:

- Restrictions on imported farmyard manure from non-organic sources and the consideration of the general regime
- Restrictions on recycled manure
- Commercial organic fertilisers must be less than 40 kg/N/ha/yr based on the total area of the farm and the amount of nitrogen out of commercial organic fertilisers must be lower than the amount of nitrogen out of farmyard manure, imported farmyard manure, green manure and recycled manure.

■ **Market gardens** (with less than 40 ha farm size) – The total amount of nitrogen applied from all types of fertilisers used may not exceed 170 kg/N/y based on the total area of the farm. If own farmyard manure is not sufficient to cover the Nitrogen demand, other fertilisers may be imported, hereby the following must be taken into account:

- Restrictions on imported farmyard manure from non-organic sources and the consideration of the general regime
- Restrictions on recycled manure
- Commercial organic fertilisers must be less than 80 kg/N/ha based on the vegetable crop rotation of the farm and the amount of nitrogen out of commercial

organic fertilisers must be lower than the amount of farmyard manure, imported farmyard manure, green manure and recycled manure.

■ **Perennials** - The total amount of nitrogen applied from all types of fertilisers used, may not exceed 96 kg N/ha/y in general, 50 kg N/ha/y for viticulture (calculated as an average over three years) and 170 kg N/ha/y for perennials in the (sub)tropics - based on the total area of the farm. If own farmyard manure is not sufficient to cover the nitrogen demand, other fertilisers may be imported, hereby the following must be taken into account:

- Restrictions on imported farmyard manure from non-organic sources and the consideration of the general regime
- Restrictions on recycled manure
- Commercial organic fertilisers must be less than 40 kg N/ha/y based on the total area of the farm and the amount of nitrogen out of commercial organic fertilisers must be lower than the amount of farmyard manure, imported farmyard manure, green manure and recycled manure.

Federation Licensees (certified by the International Certification Office)

The International Standards Committee has approved the following exemption for Federation Licensees:

For bananas a licensee can request to use commercial fertilisers up to 120 kg N/ha/yr under specific conditions (must be requested by the operator individually).

This exemption expires on the 31st December 2025.

Tab.: 9 / Maximum amount of manures and fertilisers

| Farm type | Max. nitrogen /ha/year | Max. amount of nitrogen and phosphorus* applied via commercial organic fertilisers | |
|---|------------------------|--|---|
| Agriculture / arable farming including animal production/grazing land | 112 kg | 40 kg N/ha/y and 20 kg P/ha/y as an average over the farm | Please consider restrictions on imported farmyard manure from non-organic sources; restrictions on recycled manure and the consideration of the general regime. The amount of nitrogen out of |

| Farm type | Max. nitrogen /ha/year | Max. amount of nitrogen and phosphorus* applied via commercial organic fertilisers | |
|--|------------------------|--|---|
| Horticulture / market gardens | 170 kg | 80 kg N/ha/y and 40 kg P/ha/y as an average over the vegetable crop rotation | commercial organic fertilisers must be lower than the amount of nitrogen out of farmyard manure, imported farmyard manure, green manure and recycled manure. |
| Glasshouse (as operating unit of a market garden or a arable farm) | | | |
| Glasshouse (specialised) | No limit | 80 kg N/ha/y and 40 kg P/ha/y as an average over the vegetable crop rotation | Please refer also to chapter 6.1.5.6. Production under glass and plastic. |
| Orcharding general | 96 kg | 40 kg N/ha/y and 20 kg P/ha/y as an average over the orchard area | Please consider restrictions on imported farmyard manure from non-organic sources; restrictions on recycled manure and the consideration of the general regime. The amount of nitrogen out of commercial organic fertilisers must be lower than the amount of nitrogen out of farmyard manure, imported farmyard manure, green manure and recycled manure. For Viticulture all requirements are calculated as an average over three years |
| Orcharding / perennials (sub)tropics | 170 kg | | |
| Viticulture | 150 kg [N/ha/3 years] | 40 kg N/ha/y and 20 kg P/ha/y as an average over the vineyards | |

* The amount of phosphorus can be higher, if a soil analysis shows a deficiency

6.1.4.Plant care and protection

Every material for a plant protection product must be listed in Appendix 5. If commercial preparations are bought in, care must be taken that they are free from constituents prohibited in this standard and are not produced from genetically modified raw material nor with the help of genetically modified organisms nor are they genetically modified organisms themselves.

Any usage of a material not permitted by this standard leads to decertification of the farm, or at least the treated crops and areas. For further details please compare also to chapter 2.7. Residues and to national sanction orders.

6.1.5. Crop rotation

The crop rotation for all farm types on a specific field shall be diversified, adapted to the local conditions, and include green manure crops whenever possible. The crop rotation shall include three different crops, belonging to at least two different botanical families and contain at least 20% soil building plants, preferably legumes.

About 1/3 of the crop rotation in market gardens has to be green manure and/or fodder production. This requirement does not apply to farms smaller than 2 ha (land in vegetable production). Due to the lack of a uniform definition of green manure within the framework of this standard, the classification is the responsibility of the respective certifying organisation, depending on climatic conditions and regional practice.

Crop rotation in specialised greenhouses see chapter 6.1.6.5.

6.1.6.Market gardens and field vegetables

6.1.6.1.Manures, soils and potting mixes

The regulations in Section 6.1.3.1. – Fertilisation – apply. The further requirements are:

- Soils and potting mixes are produced from a mixture of on farm materials if possible. At least 25% by volume of such materials must consist of prepared composts made from plant material or animal manure.
- Commercial potting mixes maybe used, if the following requirements are met:
 - All commercial potting mix must be approved for organic farming

- The commercial potting mix must be produced from enterprises which use at least 25% prepared compost. Alternatively, 25% of prepared compost can be added at the farm itself.
 - In order to stimulate the use of peat free potting mixes, they can be used without additional prepared compost. The preparations have to be applied after sowing/planting.
- Other potting mixes, if approved for organic farming, are only allowed with approval of the respective organisation (APP. 3A, compare to Appendix 7).
 - Plant materials for composting, and finished compost made from bark, leaves, wood shavings etc. that comes from community areas may be used if a residue test proves that they are acceptably clean.
 - Peat is only allowed as a constituent for propagation beds and potting mixes. The proportion of peat is to be kept as low as possible, and may not exceed 70%. The use of synthetic soil improving agents is not allowed. All fertilisers must meet the requirements of this standard (see Appendix 4).
 - Potting mixes and growing substrates may be steam sterilised. After sterilisation, 500 and Cow Pat Preparation are to be promptly used to guide the microbial recolonisation of the soil. (APP IC: Appendix 7)

6.1.6.2. Cultivation techniques

Soil-less growing techniques (hydroponics, thin soil layer etc.), crops grown on inert substrates (e.g. scoria) and container crops are not allowed. Thin soil layer techniques (with the exception of cress, and sprouts grown on a base that is sold with the sprouts) are not allowed.

Chicory roots should be forced in soil. If water techniques are used, the water must have no additives, which are prohibited in this standard. Water forced chicory must be declared as such.

6.1.6.3. Plant care and protection – market gardens

The regulations in section 6.1.4. - Plant care and plant protection - apply.

Production under cloth or film especially plastic which covers the soil, must be kept to a minimum. Perforated materials suitable for reusing are to be preferred.

6.1.6.4. Weed control

Crop rotation, how the soil is worked and crop husbandry are of decisive importance for weed control. Mechanical measures are to be preferred over thermal techniques. Steaming of the soil in the field is not permitted.

The soil may not be kept free of vegetation through the whole year. Mulching with organic material from agricultural origin (on-farm and brought in / like straw, woodchips, leaf mulch, wool, jute, paper) is allowed.

Industrial mulching material can only be used in crops with a high weed pressure or to cut very high evaporation rates for water conservation. Before mulching the horn manure preparation has to be applied to the soil. Mulching material is restricted as follows:

- Mulching material made of plastics based on mineral oil, regenerative raw materials or combinations thereof, are not permitted, even oxo-degradable.
- Mulching material made of bio-degradable material is permitted at the moment but will be not permitted from the certification campaign 2027 onwards.

If other materials are used, they must be usable for several years (weed suppressing mats) or be part of a local recycling system.

6.1.6.5. Production under glass and plastic

In the following mainly the term “glasshouse” is used, but that includes in the same way cultivation under plastic or foil.

The Standard distinguishes between glasshouses as part of a horticultural enterprise or specialised protected cultivation. The distinction is based on the level of fertilisation. For glasshouses as a part of a farm, the respective maximum limits of the respective farm type apply (6.1.3. Fertilisation and following). In this case, the upper limit does not have to be observed for the greenhouse, but for the entire operation.

Specialised protected cultivation has no upper limits with regard to nitrogen input, but must comply with a number of other requirements in order to compensate for the lack of integration into the overall farm organism.

Tab.: 10 / Requirements glass house production

| Category | Glasshouse <i>as branch of a farm</i> | Specialised <i>protected cultivation</i> |
|--|---|--|
| Animal husbandry | | |
| | Are classified as part of a market garden (or arable farm), therefore the general requirements for the entire enterprise apply in accordance with 6.3.2. and 6.3.3. | The general requirements concerning animal husbandry apply in accordance with 6.3.2. and 6.3.3. |
| Fertilisation (of the cultivated area, for potting mixes compare to 6.1.6.1.) | | |
| Amount of nitrogen - general | The overall calculation for market gardens (170 kg N/y) applies, higher need in the greenhouses can be compensated with less input in areas not under glass or plastic. | No upper limit |
| Amount of commercial organic fertilisers | Compare to market gardens in general - 80 kg N/ha/y with the respective restrictions mentioned under 6.1.3.1. | |
| Amount of own farmyard manure | Compare to market gardens in general | |
| Amount of imported farm manure | Compare to market gardens in general | At least two thirds of the remaining nitrogen demand (after deduction of own farmyard manure) must be covered by compost and stable manure. The share of compost and stable manure can be lowered by the respective certifying organisation if the danger of a systematic enrichment of macro nutrients is proven. |

| Category | Glasshouse <i>as branch of a farm</i> | Specialised <i>protected cultivation</i> |
|---|--|---|
| Nitrogen balance (to substantiate the need) | Not required | Required – based on expected yield, total input of kg N equals total output of kg N with a margin of 5 %, alternatively analysis regarding humus build-up of at least 1.5 % / y |

Crop rotation

| | | |
|---------------|---|--|
| Green manure | The area under glass or plastic has to be integrated in the calculation of the general requirement for market gardens (about 1/3 of the crop rotation – 6.1.5.), but green manuring does not necessarily have to take place on the area under glass or plastic. | <p>The farm has to follow a concept of crop rotation covering three aspects:</p> <ul style="list-style-type: none"> • Green manure during or in between the cash crops (about 1/3 of the crop rotation) • A rotation of cash crops over the years • Several crops present in parallel during the growing season (green manure counts as a crop). Alternatively, several varieties of the same crop in parallel during the growing season, in this case at least one variety has to be biodynamically bred or open pollinated. |
| Crop rotation | compare to marked gardens in general | |

Preparation use

| | | |
|-----------------|--------------------------------------|---|
| Cow horn manure | The general regulations (6.2.) apply | For sowing and planting for each crop culture |
| Horn silica | The general regulations (6.2.) apply | One time before transplanting, one time in vegetative period, |

| Category | Glasshouse <i>as branch of a farm</i> | Specialised <i>protected cultivation</i> |
|----------------------|--|---|
| | | one time in ripening period for each crop culture |
| Compost preparations | All organic manures (farmyard manure and imported manures), the general regulations (6.2.) apply | |

Technical requirements

| | | |
|---------------------------------|---|---|
| Heating | Heating of greenhouses based on fossil sources is not permitted from the certification campaign 2028 onwards* | |
| Frost protection | For frost protection (up to 5 °C) the source of energy can come from fossil sources | |
| Enrichment with CO ₂ | Not permitted | Systematic year-round enrichment is not permitted, for targeted enrichment to optimise the CO ₂ offer during deficit growing periods (e.g. autumn), the respective certifying organisation can issue an exemption. (APP 1 E: Appendix 7) |
| Assimilation lighting | Permitted for seedlings, herbs, motherplants and ornamentals | |
| Mulching material | <ul style="list-style-type: none"> • Organic mulching material is permitted • Biodegradable and oxo-biodegradable material is not permitted • Plastic mulching material is only permitted if it is reusable for at least 5 years | |
| Sterilisation | Not permitted (please notice exemptions for potting mixes and growing substrate / 6.1.5.1./APP 1 C: Appendix 7) | |
| Solarisation / Bio-fumigation | Bio-Solarisation as a mixture of solarisation (heat development by covering moistened soil under a transparent film) and Bio-fumigation (adding fresh organic matter to the soil) with the aim of reducing | |

| Category | Glasshouse <i>as branch of a farm</i> | Specialised <i>protected cultivation</i> |
|------------------|---|---|
| | <p>nematode pressure and on-site composting of crop residues, can be permitted by the respective certifying organisation based on an exemption under the following conditions:</p> <ul style="list-style-type: none"> - Immediate application of 500 and CPP after use of the method - Only in combination with a crop rotation concept - may be applied for again at the earliest at intervals of three years. <p>(APP 1 B, see Appendix 7)</p> | |
| Water management | Rain water recovery from the area under glass is mandatory, glass houses smaller than 50 m ² and plastic tunnels are excluded from that requirement. | |

Biodiversity

| | | |
|--------------|--|--|
| Biodiversity | <p>The area under glass and plastic has to be integrated in the overall biodiversity concept of the farm (6.1.8.3. Biodiversity reserve)</p> | <p>The farm has to fulfil the requirements of chapter 6.1.8.3., but with 20 % biodiversity reserve** instead of 10 %, biodiversity reserve must include the area under glass or plastic. Compensation only based on the premises outside the greenhouse is not possible. Special attention shall be paid to green manure during the growing season, flowering strips and open-pollinated varieties</p> |
|--------------|--|--|

* This regulation applies to currently certified farms from the 2028 certification campaign onwards. For conversion farms from the national implementation of this standard.

**For this requirement national certifying organisations can grant existing licenses a transitional period of five years until the certification campaign 2027. For companies in conversion, this regulation already applies from 2021 onwards.

6.1.6.6. Sprouts and shoots

The production of sprouts and shoots must use seeds, roots and rhizomes, which have been multiplied biodynamically. Material of conventional origin is not allowed.

The water used in the production of sprouts and shoots must be of drinking quality. If used, all substrates and carriers must meet the requirements of this standard.

6.1.7. Perennial crops

The soil may not be kept free of vegetation or natural cover throughout the whole year. The establishment year may be an exception to this regulation if necessary (APP 2: see Appendix 7).

Exemptions for perennials in semiarid climates require approval of the respective certifying organisation. (APP 2: see Appendix 7).

6.1.7.1. Support stakes

In temperate climates no tropical or sub-tropical woods are allowed to be used as support stakes for reasons of environmental degradation. The tropical grasses, bamboo and 7lisast, may be used.

6.1.8. Mushrooms

6.1.8.1. Origin of spores

The origin of spawn follows the general regime, wild harvest is permitted. The requirements for substrate for cultivation spawn on a Demeter farm are the same as for growing substrate (compare to next chapter).

6.1.8.2. Origin of growing substrate

- Mushroom substrate must consist of materials derived from biodynamic farming or those permitted for use in biodynamic farming, such as mineral products.
- Straw harvested in the second year of conversion may be used in the substrate.
- In the case of wood brought in from outside the farm e.g. oak logs (for shitake), chippings or sawdust, no insecticidal post-harvest treatments must have occurred.

- Peat as a covering material is permitted in mushroom cultures. Other permitted inputs are listed in the appendices.

6.1.8.3. Biodynamic measures

The compost preparations must be introduced into the substrate at an appropriate stage prior to inoculation. If the growing substrate was sterilised, the sets of compost preparations must be applied after the sterilisation and before subsequent incubation. Mushrooms growing on sterilised wood substrate shall have the compost preparations inserted in the sawdust during aging prior to the heat treatment if they are not used after it.

The horn manure (500) preparation must be applied at least once per crop cycle. This must be after the substrate has been inoculated. The horn silica (501) preparation must be applied at least once per crop cycle.

6.1.8.4. Illumination

Mushroom species which are known to react to light, e.g. Shiitake, are to be cultivated with light. An exemption may be given by the respective certifying organisation if climate requires insulated growing sheds. (APP ID: see Appendix 7).

6.1.8.5. Health of crop

Prevention is the overriding principle for maintaining the health of the cultures through hygiene, climate control, mechanical pest repellents and the biodynamic preparations.

Salt may be used to control fungal diseases. Other products for pest and disease control are listed in Appendix five.

6.1.8.6. Cleaning and disinfection of growing sheds and growing substrate

- For cleaning mushroom growing rooms / sheds, physical procedures must be used, together with water or steam. Permitted detergents, disinfectants, sterilants and other sanitisers are listed in paragraph 5.5. of this standard. They must be DDAC/BAC free.
- Equipment may be sterilised with 70% alcohol or with agents based on per-acetic acid. Formaldehyde must not be used.

- After cleaning all interior space, surfaces must be rinsed with potable water. This is not required only where the mushroom substrate is introduced after complete biodegradation of the cleaning / sterilising agent.
- An exemption of the respective certifying organisation can be granted for disinfection of the growing substrate in reasonable and justified cases. After sterilisation, 500 and Cow Pat Preparation are to be promptly used to guide the microbial recolonisation. (Exemption 1C, Appendix 7)

6.1.8.7. Recycling of spent mushroom compost

There must be a plan for the routine recycling of all spent mushroom compost. Licensees are encouraged to find biodynamic operations which can benefit from such material.

6.1.9. Biodiversity and environment

6.1.9.1. Clearing and destruction of forests and areas of high conservation value

The clearance of virgin rain forest and other areas of high conservation values is forbidden.

Considered as areas of high conservation value are:

- Primary forest
- Mangrove forest
- Marshland and swamps
- Steppes and savannahs
- High mountain vegetation

As well as:

- Concentrations of biological diversity
- Habitats of endangered or rare species
- Sites of critical cultural, ecological, economic or religious / sacred importance

If areas are cleared by natural forest / bush fires or other disastrous events, the original status before the clearing remains.

Conversion is only possible, if there is clear evidence that the areas were not created by clearing virgin rainforest or other areas of high conservation value after the year 2020, for details please compare also to chapter 6.4.2. and 6.4.3.

6.1.9.2. Irrigation water

6.1.9.2.1. Irrigation water – general

Irrigation must be scheduled so that the amount of water and/or the frequency of application does not lead to soil degradation (e.g. salination, erosion).

All ground or surface water abstraction must have the required official approval.

The use of fossil water or the use of non-renewable water resources is not permitted. The respective certifying organization can grant an exemption. The exemption must include a detailed plan assessing the impact of the usage and a water management plan according to chapter 6.1.9.3.3. (APP 5: Appendix 7)

6.1.9.2.2. Irrigation water – quality and treatment

The water must not be contaminated with pesticide residues, disease causing bacteria or parasites, or contaminate the end product in any way. If surface water is used for professional irrigation the water quality must be monitored through regular analyses.

Particular care has to be taken if surface water is used in whose tributary area non-organic agriculture or industry is practised.

- Filter systems are to be preferred for water treatment.
- The use of chlorinated water as irrigation water is permitted in regions where water is chlorinated as standard.
- UV-Radiation and ozone treatment of irrigation water is permitted.
- Any other treatment like additional chlorination has to be approved with an exemption by the respective certifying organisation. (APP 5B: Appendix 7)

6.1.9.2.3. Irrigation water – water management

Farms whose irrigation systems draw all or part of their water from surface water or groundwater must document their annual water consumption in a meaningful way. The documentation must refer to the origin of the water, consumption per unit area and total

water consumption. Farms that exclusively use rainfed agriculture or irrigate from rainwater collection are excluded from this regulation.

In the event that:

- the average water consumption increases over the years,
- the current water consumption is significantly higher than the demand values of the respective crops,
- savings via e.g. drip, beam or minisprinkler systems are not exploited to the full,
- rainwater collection options are not exhausted,
- the farm is located in a region with particular high or extreme water stress,

the respective certifying organization is entitled to demand a detailed water management system if the certification is to be continued. BFDI will provide a respective water management plan.

6.1.9.3. Biodiversity reserve

The farm must show a commitment to the maintenance of farm biodiversity. If the Biodiversity reserve on the farm and in areas directly adjacent to it does not reach 10% (see specific requirements for glass houses under 6.1.6.5) of the total farm area, a biodiversity plan that documents how this will be achieved, with a clear time frame, must be approved by the respective certifying organisation. This plan can include other cultural elements such as the maintenance of rare or endangered breeds of plants and animals, fostering bird/insect life by providing habitats, utilisation of biodynamic plant and animal breeding, etc.

Areas counting as Biodiversity reserve:

- Lightly grazed fields that allow for some vegetation to flower and go to seed.
- Wooded areas (agroforestry), unused woodland and native trees (individual trees suitable for the location / 100 m² per tree) and avenues as well as undisturbed forest.
- Headlands (if not covered with the main crop)
- Land seeded to annual/ perennial plants that are allowed to go through flowering. The plants may not be the main (intensive, commercially harvested) agricultural crop on the land unless it's green manure or pasture, and it has to be a crop pollinated by insects"
- Fallow land as part of the rotation or otherwise
- Undisturbed grasslands (No mowing in the courses of a year)
- Fence lines (width of undisturbed land can be counted)

- Hedges, field and stream bank tree groves
- Water races, ponds, wet lands, riparian areas
- Ruderal areas, (e.g. landslips), stone windrows and heaps
- Dry stone walls
- Unsealed natural paths and tracks
- Other biodiversity reserve contributions, including husbandry of rare or endangered plant and animal species
- Other elements approved in the Biodiversity plan

Those member countries who do not implement Biodiversity as a standard are to include biodiversity as an obligatory issue for farm talks or similar instruments of quality management, which focus on the development of the farm and the motivation of the people.

6.1.10. Biodynamic plant breeding

6.1.10.1. Scope of applicability and fundamentals

The standard for biodynamic plant breeding were developed primarily by the Association of Biodynamic Plant Breeders (Assoziation biologisch-dynamischer Pflanzenzüchter, ABDP). This standard lays the foundation for the agreement between the users of the phrase “biodynamically bred plant varieties” and the respective certifying organisation responsible for issuing contracts to biodynamic plant breeders and regulating the use of the above phrase for labelling their products. For details concerning the labelling of biodynamically bred plant varieties please see the labelling section of this standard.

The intention of the biodynamic plant breeding standard is to provide a standardised set of criteria for identifying and labelling biodynamically bred plant varieties. This makes it possible to differentiate biodynamically bred varieties from other varieties that do not meet the standard’s criteria. While the Demeter logo indicates that plants or plant products were produced on a Demeter certified farm, it does not currently identify the origin of the seed used to grow the plants. The biodynamic plant breeding standard aims to draw special attention to the breeding background of the plants by labelling biodynamically bred plant varieties as such.

6.1.10.2. General requirements for breeding new varieties

- Breeding must take place on Demeter certified fields or otherwise appropriate plant breeding facilities. If this is not possible, breeding can take place under the conditions outlined below.
- If breeding takes place on certified organic fields, the biodynamic preparations must be applied as follows: minimum one annual crop-appropriate application of horn manure and horn silica preparations, as well as the application of biodynamically prepared compost or, if not available, cow pat pit (CPP) preparation on all fields. These requirements are to be agreed upon in writing with the certified organic farm, for e.g. with a crop management contract.
- The farm where the breeding takes place as well as the relevant documentation of all breeding activities must be accessible and available for a Demeter inspection at all times.
- The development of a new variety is initiated either via intentional or incidental cross-pollination or the mutation of heritable traits and subsequent selection. A minimum of four years of selective breeding under biodynamic conditions, as described under bullet points 1 and 2, is essential.
- The following breeding methods are not permitted:
 - All methods not permitted under the IFOAM standards
 - Hybrid breeding, regardless of production method
 - Double haploidy or polyploidisation
 - Plants produced using cytoplasm or protoplasm fusion
- The use of hybrids or double haploid varieties as parent lines for the development of new, biodynamically bred varieties is permitted.
- In order to be recognised as a registered plant variety, it is essential that all newly developed biodynamic varieties are registered with the responsible patent office. Only then can the variety (seed) be sold to others.
- In case of a closed production system, the patenting or registration of a new biodynamic variety may not be relevant to the breeder. The respective certifying organisation can nevertheless issue an official recognition of the variety as a “biodynamically bred plant variety”. To receive recognition, an application can be submitted demonstrating that the variety meets the necessary degree of differentiation from other varieties of the same species according to relevant seed and plant breeding or patenting regulations.

6.1.10.3. Requirements for conservation breeding

Conservation breeding inherently takes place on certified biodynamic farms, or, as a minimum requirement, on organic certified farms with under 6.1.10.2. described additional requirements.

6.1.10.4. Special documentation requirements

- The first delivery of seed to the farm must be documented. (Delivery slip or shipping invoice/receipt/supplier/quantity/treatments/genetic modification risk analysis)
- A crop plan must show which fields were used for growing and selecting the variety in question. The parent lines of the selected plants must be traceable using invoices or other supporting documents.
- The sale of seed must be documented via a delivery order invoice as required for EU organic inspections. These invoices must state the name of the variety/lot/quantity/treatment of seed/recipient.
- The required documentation makes it possible to track the variety within the crop rotation and trace the development of the variety over the course of multiple generations.

6.1.10.5. Transparency guidelines for plant breeding

The development history of a variety includes the following information:

- Variety, cultivar, variety denomination, name of breeder, date, breeding aims
- Source of genetic (parent) material for breeding, description, supplier, first cultivation date, indication whether the parent material is a result of cross-breeding.
- Under which conditions was or is the variety cultivated and selected? State location and cultivation methods.
- What selections methods are/were used? Mass selection (positive or negative): how many individuals from a total of how many are chosen? In case of single plant selection, are plants separated and grown out/reviewed according to individual traits or is a mixture of the prepared seed grown out (Pedigree method versus bulk-population method)? Was the procedure changed at any point over the generations? Were there times during the selection period where unique selection criteria were applied? Were specific testing methods used to support the selection process? Under which conditions did additional trials take place? Are there specific requirements that needed to be fulfilled when the variety was introduced for wider use?

- When was the variety registered with the responsible patent office?
- Description of the process of seed propagation used to produce seed for sale and distribution.
- A current description of the variety: typical characteristics, recommended cultivation methods and other practical guidelines for working with the variety, results of quality analyses.

6.2. Biodynamic Preparations –

Please compare also to Appendix 10.

An effective method of stirring the preparations, or a contract with a stirring and spraying service, must be present on the enterprise, and inspected as part of the annual inspection.

A prerequisite for the certification of the farm as “In Conversion to Demeter” after 12 months of farming to this standard is at least one application of the cow-horn manure and the cow-horn silica, as well as the spreading of prepared manures (or the cow pat preparation produced with the compost preparations as a substitute) on all areas of the enterprise. This applies equally to new areas to be converted.

The spray preparations are to be used as appropriate to the crop type:

- Cow-horn manure or prepared cow horn manure (500P) is to be spread at the start of the vegetative phase, or after harvest of the certified crop, but in any case at least once a year at a rate of at least 50 gr/ha. Horn silica is to be sprayed as the plant stage of development dictates, preferentially during the intensive growth stage and imperatively between growth stage and harvest, at a rate of at least 2.5 g/ha. Perennial crops: For newly planted crop (first year of plantation) an absence of horn silica spraying is tolerated even if still recommended on vigorous plant. This regulation can only be used if there is no harvest in the first year.
- The spray preparations must be applied with clean equipment.
- All organic manures (stable manure, compost etc.) are to be treated with the compost preparations. In the event that a farm has not own composting or composted stable manure, e.g. extensive pastoral farms it is obligatory to spread a composite preparation (such as cowpat prep, barrel compost, prepared 500 etc.) as a substitute on those areas, which receive no prepared manure in the course of the year.
- All productive areas of the farm must be completely covered with the spray preparations every year. This requirement does not apply to unused or other permanently non-productive areas.

- A lower horn silica spraying frequency may be applied based on an exemption granted by the respective certifying organisation (APP 4B: Appendix 7) to unmowed pastureland used for ruminants under the following conditions:
 - Each unmowed pastureland should at least be sprayed with horn silica every three years
 - Two-third of fodder areas should be sprayed with horn silica every year
- An exemption can be granted for steep slopes in mountainous regions (providing they are not intensively managed, or mown), and for areas that cannot be driven on. This exemption can be considered by the respective certifying organisation when the licensee produces a preparation management plan describing the planned preparation usage (areas incompletely or not covered and with what frequency, stirring and spraying machinery available on the farm, proposed improvements to the coverage in the future, etc.) The exception has a time limit, but may be renewed (APP 4A: see Appendix 7).

6.3. Animal Husbandry

6.3.1. Scope

Section 6 gives rules for all livestock kept on a Demeter enterprise for commercial purposes. Animals not certified as organic and their products used for home consumption can be taken out of certification without violating the conversion of the whole farm but cannot be marketed under the Demeter trademark.

6.3.2. Requirements to have livestock

Demeter certification of agricultural enterprises without the incorporation of animals on the farm is not possible.

Preference should be given to the incorporation of ruminants with own livestock or co-operations in which fodder and manure are exchanged.

Wherever this is not possible, other animal livestock have to be incorporated (for minimal stocking rates please see the next chapter).

In enterprises having solely perennial crops, the requirement to have their own animals is not obligatory if manures, compost, green manures, and preparation usage is particularly intensive. For market gardens this requirement depends on the size of the farm (please compare to the next chapter).

6.3.3. Stocking rate

The stocking rate is determined by the possibilities for fodder production, as dictated by climate and the local conditions. It is to take into account the maintenance and development of soil fertility.

Tab.: 11 / Stocking Rates

| Farm type | 0 – 10 ha | 10 – 20 ha | 20 – 40 ha | > 40 ha |
|-------------------------------|--|---|---|--|
| Arable farming | Stocking rate is defined by the respective certifying organisation | Stocking rate must not be less than 0.1 livestock units/ha. | | Stocking rate must not be less than 0.2 livestock units/ha. |
| Perennial farming | Stocking rate is defined by the respective certifying organisation | | | |
| Market gardens / horticulture | Stocking rate is defined by the respective certifying organisation | Stocking rate must not be less than 0.1 livestock units/ha. from the 2032 certification campaign onwards.** | Stocking rate must not be less than 0.1 livestock units/ha. from the 2027 certification campaign onwards. | Stocking rate must not be less than 0.2 livestock units/ha.* |

The calculation of the stocking rate is always based on the total area under production.

* This regulation applies to currently certified farms from the 2024 certification campaign onwards. For conversion farms from the national implementation of this standard.

** This regulation applies to currently certified farms from the 2032 certification campaign onwards. For farms in conversion from the certification campaign 2027 onwards.

For a calculation of different livestock units, please see Appendix 1.

Compensatory measures for the minimum stocking rate are described in chapter 6.3.4.; any further national compensatory measures or concepts require approval by the Standards Committee of BFDI.

The maximum stocking rate may not exceed 2.0 livestock units/ha, corresponding to a maximum of 1.4 manure units/ha.

For Federation Licensees (certified by the International Certification Office)

| Farm type | 0-10 ha | 10-20 ha | 20-40 ha | >40 ha |
|---|--------------------------|----------------------|----------------------|----------------------|
| Arable farm | No minimum stocking rate | As in table 11 above | As in table 11 above | As in table 11 above |
| Perennial Farm | No minimum stocking rate | | | |
| Market Gardens/ Horticulture | No minimum stocking rate | As in table 11 above | As in table 11 above | As in table 11 above |

6.3.4. Co-operation between farms

To fulfil the minimal requirement concerning animal husbandry according to chapter 6.3.3., the co-operation between two or more certified biodynamic farms in the sense of a biological unit is possible.

In cases where no biodynamic farm is sufficiently close by, co-operation in the sense of a fodder-manure exchange can be organised between the certified biodynamic farm and an organic farm. In either case, however, there must be a legal contract, which must be lodged with the respective certifying organisation.

A **fodder-manure co-operation** with an organic farm is permitted, the following conditions must be fulfilled:

- The co-operating partner farm must feed the animals with 100% organic fodder.
- The co-operating partner farm must be converted entirely to organic production.
- The corresponding equivalents of feed and fertiliser must be physically exchanged.
- Farmyard manure has to be prepared on the farm where it originates (ideally in the stable), or at least six weeks before application.
- The equivalent stocking rate for the complete area may not exceed 2.0 livestock units.

A **fodder-cooperation** with an organic farm is permitted, the following conditions must be fulfilled:

- There must be a legal contract, which must be lodged with the respective certifying organisation.
- For annual and perennial fodder plant cultivation the contract has to cover at least three years.

- The biodynamic farm receiving the feed, is responsible for the application of the preparations which must start at least one year in advance.
- If crop rotation foresees food crops on the cooperation area, those cannot be marketed as Demeter. However, the application of preparations has to be continued during that time, if the fodder production is resumed in the following years.
- Fodder-production in cooperation under the previous conditions can be treated as on farm production and Demeter amount for the fodder absorbing biodynamic farm.

6.3.5. Management

The stable style and the other management conditions must be organised such that the animals can express normal behavioural characteristics and movement; e.g. they must be able to stand and lie down unhindered, and have a dry resting place. Stables in which the animals have freedom of movement are therefore preferred.

- The management system must allow the animals free contact with their natural surrounding (sun, rain, earth under foot etc.). This is guaranteed in particular by access to pasture, or at least to the open air. Care must also be taken to provide sufficient light, a good stable environment and protection from the wind. The starting point of offering access to pasture or open air for young stock may be set by every certifying organisation.
- To tether animals in housing is forbidden, except in relation to individual animals for a limited time and if justified for veterinary reasons. The isolation of tethering of livestock may only be authorized by certifying organisations, and only for a limited period, where workers' safety is compromised or for animal welfare reasons.
- Small cattle or dairy farms may allow tethering for cattle (excluding young stock) where it is not possible to keep the cattle in groups appropriate to their behaviour requirements, provided they have access to pastures during the grazing period, and have regular access to open air areas when grazing is not possible. A definition of small farm size must be provided by the respective certifying organisation.
- Temporary limited exemptions from the requirements governing housing and outside access may be issued by the respective certifying organisation with regard to the following aspects: (APP 8: see Appendix 7)
 - Stable is too small
 - access to stream lake or pond for water fowl is lacking
 - poultry houses which do not fulfil all requirements
 - open air run for poultry which is not covered with grass
 - Shelter plantings or artificial shelter not available in the exercise area

6.3.5.1. Cattle management

All categories of cattle (Suckler cow husbandry, bulls, young stock and breeding replacement, dairy cattle and suckling calves) are to have access to pasture during the summer half-year. Where this is not possible, access to the open air must be available all year round. Cows should be given freedom of movement at calving. A calving bay must be provided for if stable renovations occur.

In those enterprises where, because of their situation in the village, or the distance to/size of their outlying fields, or for other practical reasons, either access to pastureland or open air run grazing is not possible, an exemption may be approved. This exemption can only be granted for either missing access to pastureland or open air run to the same licensee. (APP 9: see Appendix 7).

The stable type and the internal arrangement and fittings must meet the following requirements:

- The sleeping stalls for cattle are to have appropriate bedding.
- Fully slatted floors (more than 50%) are not permitted, and the slatted area may not be calculated as resting-place.
- Cow trainers are not permitted.
- Sufficient area to be provided and the herd managed to allow the expression of social behaviour and unhindered feeding.
- There must be at least as many feeding/sleeping stalls as there are animals in the stable. In stables with ad lib feeding, fewer feeding stations may be offered.
- Calves are to be given contact with each other as soon as possible. They are to be reared in groups from the second week on if there are sufficient numbers of animals of the same age. Boxes for calves are permitted only through the first week.

Dehorning of animals and dehorned animals are not permitted on the farm. In well-justified cases, an exemption may be approved by the respective certifying organisation but must be reviewed annually.

Species of ruminants polled by any form of genetic engineering cannot be used to produce Demeter milk, meat and fibre. Historic, land race and heritage breeds of naturally polled ruminants and genetically hornless breed, which no longer exist in horned form (see the following positive list) are permitted for the production of meat only. Those breeds may be used for the displacement crossing.

- Aberdeen Angus
- Galloway

- Murray Grey
- Sidetrønder nordlandskfe STN
- Vestlandsk raudkolle
- Østlandsk rødkolle
- Jarlsbergfe
- Dølafe

(This list is not exhaustive, further breeds can be requested from the Standards Committee.)

Genetically hornless breeds in any form and displacement crossing either with genetically hornless breeds or crossbreeds in the production of Demeter milk is prohibited.

If an enterprise willing to convert has genetically hornless breeds, the enterprise must begin immediately after the start of the conversion period with displacement crossing of the hornless genetics. During the process of transition, hornless cattle are tolerated on the enterprise, if progress towards horned cattle can be shown during inspection. Within meat cattle, the historic, land race and heritage polled breeds mentioned above can be used for displacement crossing.

It is permitted to castrate calves to improve the health, welfare or hygiene of the animals. The operation must be carried out at the most appropriate age by competent personnel and any suffering of the animals must be reduced to a minimum.

6.3.5.2. Management of sheep, goats and horses

The conditions for cattle apply to sheep, goats and horses accordingly.

- In addition, operations such as castration, attaching elastic bands to the tails and tail docking must not be carried out systematically in biodynamic farming.
- Some of these operations may be carried out to improve the health, welfare or hygiene of the animals. Such operations must be carried out at the most appropriate age by competent personnel and any suffering of the animals must be reduced to a minimum.

6.3.5.3. Management of pigs

Sleeping stalls are to be spread with straw (or other organic litter). Fully slatted floors (more than 50%) and management where animals are tied up are not permitted. Access to the open air where rooting is possible must be offered.

- Sows may be contained for farrowing for the shortest time only (until 14 days at the latest). They may not be tied up in housing. Sows must have access to the open-air. Open sows, gilts and young sows are to be kept in groups.
- Confining pens with narrow slatted floors or cages are not allowed for weaned piglets.
- Tooth cutting or other preventative tooth filing of piglets is not allowed and neither is tail or ear docking.
- Nose rings or hog rings, which prevent the pigs from rooting, are forbidden.
- It is permitted to castrate piglets for health, welfare or meat quality reasons. The operation must be carried out at the most appropriate age by competent personnel, under anaesthesia and analgesics and in a manner to prevent any suffering of the animals.

6.3.5.4. Management of poultry – basic regulations

All poultry species require management that allows their natural behaviour. For the improvement of the social structure in poultry flocks, two roosters must be kept for every 100 layer hens.

- For poultry that normally perches, elevated resting places appropriate to the species must be provided. Sufficient sand-bath area and areas for sun-bathing must be supplied, and water poultry must have an adequate water supply. Ducks need to have water areas for swimming; geese need a supply for plunging their heads and necks.
- Open-air runs are required for all types of poultry. The starting point of offering access to an outside run for young poultry may be set by every certifying organisation.
- Stables, buildings and housing must be constructed and maintained in a way that meets the natural requirements of the birds. Caged systems are prohibited. Nest boxes are to be provided for egg laying.
- Sufficient daylight, good climatic conditions in the housing as well as low dust exposure are indispensable preconditions for the health and welfare of poultry. Any mutilations of poultry such as beak cutting, trimming, or castration are excluded. The keeping of capons is excluded as well.
- The minimum slaughter age for all kinds of poultry is given in Appendix 8.
- Daylight can be extended by illumination to a maximum of 16 hours a day. In the scratching area and in the area for feeding and water supply there must be sufficient daylight. For illumination only lamps without a stroboscopic effect are permitted.
- The housing may contain a maximum of 3,000 layer hens (preferably held in flocks of 1,000 hens), or parent animals for layer hens or fattening animals, 9,600 young layer hens and their brothers or young parent animals (separated into flocks of no greater than 4,800 birds

each), 10 x 200 layer quails; max. 1,000 turkeys, 3,000 cockerels or guinea fowl, 1,000 geese, 1,000 ducks and 10 x 500 quail for fattening. Exemptions may be approved by the respective certifying organisation for existing buildings, but not for new applicants for certification. All new facilities must comply with this standard (APP 11: see Appendix 7).

- Depending on the local climate of the country, it makes sense to offer stables with different climate areas (warm inner area and an outer area called winter garden or veranda, compare also to next chapter). It also can make sense to offer a poultry run. Such a poultry run, which counts as open run area (pasture area), is covered with scratchable, humidity absorbing material and protects the pasture close to the housing from high input of manure.
- For pasture for geese and ducks a shelter is sufficient.

The aforementioned requirements are obligatory for all operations regardless of the number of poultry kept.

6.3.5.5. Management of poultry – specific regulations

This chapter is not obligatory on farms with a total number less than 100 layer hens, 100 chickens for fattening, 20 turkeys, geese or ducks.

- When a winter garden or veranda is offered, national certifying organisations are authorised to set specific conditions for the stocking rates in the housings, which take into account the additional area of the winter garden.
- Stocking rate, number and width of pop-holes, equipment for feeding and water supply, higher perches and nests with litter or with a smooth inlay must be adjusted to the weight of the animals.
- During the active phase the animals must not be hindered in their access to the different housing zones. Both the winter garden and the housing must be illuminated.
- The width of the pop-holes must be at least 4 m for every 100 m² of housing ground (including higher levels). The height of the pop-holes is to be adjusted so that animals can walk through upright. Raised slatted floors must be constructed in a way to prevent droppings falling on the birds below and shall be equipped with an efficient system of manure removal. There must not be more than two slatted floors one upon the other. At least one third of the accessible housed area must be covered with litter.
- The open-air run area shall meet the natural requirements of the respective poultry species. For chickens at least 40% of the area must be evenly covered with perennial crops to provide protection, for example with bushes and trees. Annual crops or artificial protection can be used until permanent crop cover reaches 40% of the area. Mobile stables are exempted.

- The minimal area required per bird is: 4 m² for layer hens and breeding animals, 1 m² per kg live weight of poultry for fattening, but at least 4 m² per animal (2,5 m² in mobile housings), 10 m² per turkey, 4,5 m² per duck. Geese need a minimum of 4 m² pasture area per kg live weight, and a minimum of 15 m² per goose. Pasture must not be further from the housing than 150 m for layer hens, animals for fattening and turkeys, and 80 m for ducks. For geese the distances are unrestricted.
- Young layer hens and their brothers need access to pasture (1 m² per animal).
- The breeding and hatching have to be included in the certification process.
- In-egg sexing is not allowed as a method to separate male from female poultry

6.3.6.Feeding

Each enterprise strives for full self-sufficiency. Concentrates comprise mainly grain and legumes. The feeding of by-products of industrial extraction is not permitted. Animal products are not permitted (except milk, milk products, whey and eggs).

Antibiotics, sulphonamide drugs, coccidiostats, hormones, synthetic compounds from organic chemistry and pharmaceuticals are not permitted as additives to feed. Isolated amino acids, growth promoters, production enhancers (feed antibiotics and enhancers) and synthetic chemical feed additives (except vitamins) are not allowed.

Conventional fodder may not be purchased. In emergency cases the certifying organisation may grant an exemption:

- Only in unforeseeable occurrences such as extreme climatic conditions, natural catastrophes, damage due to fire, etc.
- Deviations from the general feeding regime exempt by the certification organisation shall comply with the principle of availability and the general regime by reducing the on-farm share, then the Demeter share in general, then the organic share .
- Non-organic shares are restricted to the fodder components mentioned in Appendix 2. (APP 22: see Appendix 7).

Each purchase of feeds, feed-preparations, feed additives, minerals- and vitamin mixtures and silage making processing aids has to be documented. In the same way it has to be checked that there are no genetically manipulated agents or their derivatives in the product. Proof of unavailability from biodynamic sources is to be included as part of the annual certification process. Documentation showing the origin, designation, amount and how the feed was used must be supplied for every importation of feed.

6.3.6.1. On farm production - Demeter share for all animals

Fodder produced on the farm forms the basis of animal nutrition. At least 50% (60% for ruminants, equidae and camelidae) of the feed (DM) must originate on the farm or in co-operation with another Demeter farm. Fodder produced on the farm is the starting point for a feeding regime appropriate to the animals carried on that farm.

- If fodder is to be imported onto the enterprise, particular care in choosing feed quality suitable to Demeter production and the general regime is to be taken.
- For poultry keepers with less than 350 animals, who have no or not enough arable land to achieve the required minimal proportion of on farm produced fodder, a reduction of the minimal amount of the on-farm proportion is permitted. How far the reduction goes and other additional conditions are to be regulated by the respective certifying organisation.

Tab.: 12 / On farm production and average annual ration for all animals in dry matter

| Animal species | Min. Demeter share in the annual ration* | Max. organic share in the annual ration** | Min. on farm production*** | Approval for less Demeter share in the case of need possible? |
|----------------------------------|--|---|----------------------------|---|
| Ruminants, equidae and camelidae | 70% | 30% | 60% | No**** |
| Pigs | 70% | 30% | 50% | Yes, down to 50% |
| Poultry | 70% | 30% | 50% | Yes, down to 50% |

*May contain "in conversion to Demeter" feed, if the feed has an organic certification.

**May contain "in conversion to organic" feed

***Can be an average calculated for all animals of the farm, as long as it is in line with national organic law

****Except for emergency cases with approval of the respective certifying organisation (APP 22: see Appendix 7).

6.3.6.2. In conversion feeds

- Feeds from on-farm production which is in the first year of conversion to Demeter and organic can only be fed on the own farm. In the first year of conversion this feed can be fed up to 100% of the ration. Feed remaining from the first year can be fed in the following years up to 20% in the ration. The same applies to feed from areas that are newly converted.

- Feeds from on-farm production which is in the second year of conversion to Demeter and organic can be fed on the own farm without limit. It can only be brought in up to 30%.
- Feeds from on farm production which is in the second year of conversion to Demeter and already organic can be fed on the own farm without limit. Brought in feeds with this status may be up to 100 %. See also table 12.

6.3.6.3. Feeding of dairy cows, sheep, goats and horses

The fodder must be appropriate and contain as high a content of roughage (green-feed e.g. pasture, hay, silage) as possible, but at least 75% DM throughout the entire year. The majority of summer feeds must be green material, preferably grazed from pasture.

- In winter the animals should get as much hay as possible (cows three kg per animal per day with small ruminants getting correspondingly less). If climatic conditions do not allow the harvesting of good quality hay, exemptions may be given by the respective certifying organisation to feed silage of grass (clover) mowed after the start of flowering as a substitute. (APP 13: see Appendix 7)
- The base fodder ration may not consist solely of silage over the course of the whole year.
- Feeds of animal origin are excluded for all ruminants. This restriction does not apply to milk and milk products.
- In all cases, the corresponding effects on the certification status of the end products must be taken into account.

6.3.6.4. Feeding of beef cattle

The feed ration must be appropriately constituted for ruminants, with a proportion of at least 75% roughage in all seasons e.g. hay, silage or feed straw. Silage can form the majority of the feed ration, but summer feeding must include one third fresh green material.

In winter the animals should get as much hay as possible (three kg per animal per day). If climatic conditions do not allow the harvesting of good quality hay, exemptions may be given by the respective certifying organisation to feed silage mowed after the start of flowering or straw as a substitute. (APP 13: see Appendix 7)

6.3.6.5. Feeding of replacement calves, calves for fattening, foals, lambs and kids

The following feeds, as far as possible from on-farm production, can be used: milk, if possible, mother's milk, roughage, milled grains. Calves and foals should get milk for at least three months, sheep and goats 45 days. Fattening on milk alone without the addition of some form of roughage is prohibited.

Feeding with milk replacers is permitted, following the general regime and under the following conditions:

- The milk replacer shall consist of at least 80 % (on the dry matter basis) of milk powder or skimmed milk powder.
- The milk replacer may contain whey powder, cereal starch, sugar, vegetable oils, added vitamins and minerals.
- The milk replacer must not contain vegetable protein sources or palm or coconut oil.

Depending on the quality of the ingredients and the duration of feeding, there may be consequences for the certification status of calves sold in accordance with chapter [6.3.8.](#) and following.

6.3.6.6. Nomadic livestock and grazing on uncultivated areas

Products from nomadic livestock may be marketed as Demeter if two thirds of the fodder is from own production and half of the fodder comes from farm areas that are biodynamically managed. The balance may come from extensively managed areas, including nature reserves, which must have had no use of synthetic fertilisers or plant protection chemicals, or from areas of the farm where the preparations cannot be sprayed because of steep slope or inaccessibility (APP 4A: see Appendix 7).

- Animals reared in this way may only be marketed using the Demeter trademark six months after weaning, at the earliest, providing they have been fed and managed to the standard during this period.
- A grazing diary must be kept.

6.3.6.7. Guest animals

Animals of conventional or organic origin not in the possession of the certified farm can be kept on Demeter pastures for grazing or in Demeter stables under the following conditions.

- A written agreement between the owner of the animals and the farm must be in place. In well justified cases the national organisation may regulate this differently. For example, for cooperatives or farmer groups, when the administrative effort is considered too high.
- All animals must be clearly identifiable by earmarks or comparable marking.
- All animals must be kept concerning the management, medicinal treatment and feeding according to this standard.
- If guest animals fulfil these requirements, they can be integrated in fodder-manure-balance of the certified farm.

If guest animals do not fulfil the above-mentioned requirements and are fed organic or conventional fodder the following conditions are required:

- A written agreement between the owner of the animals and the farm must be in place.
- Animals have to be clearly separated in stables and on pastures.
- The feeding of the animals has to be clearly separated.
- If guest animals are kept under separated conditions, they can be integrated in fodder-manure-balance on the basis of a fodder-manure-cooperation according to [6.3.4.](#) only if they are kept at least organic.

In both cases an exemption is required from the respective certifying organisation (APP 14: see Appendix 7). The request for the exemption must have a clear description of the circumstances especially with regard to separation measures.

6.3.6.8. Community pasture

Animals from Demeter enterprises may be kept on community pastures if the pasture has not been managed conventionally for at least three years and if the conventional animals are from extensive conventional management. No conventional fodder supplements may be fed.

- Milk may be certified Demeter when the animals return to Demeter compliant feeding.
- Meat may be certified Demeter when the animals are kept at least half the lifetime according to this standard.

Exemptions to use community pasture are required from the respective certifying organisation (APP 15: see Appendix 7).

6.3.6.9. Feeding of pigs

The aim is to produce all the required for the pigs on the farm. They have to be offered a daily ration of roughage or possibly feeds of high moisture content (e. g. herbage, beets).

- The total amount of brought in feed is limited to 50% (DM).
- The respective certifying organisation may allow the purchase of certified organic fodder for pigs in amounts up to 50% if no Demeter fodder is available. The unavailability has to be proven. (APP 12: see Appendix 7)

6.3.6.10. Feeding of poultry

A part of the diet must be given so that the animals can forage for food. Fowl-like birds must have 20% of their fodder as whole grains. At least 5% of the total fodder must be given in the litter or in the open air run so that they may forage for the food. Structured raw material has to be provided; for poultry for fattening as whole grain in the compound feeds.

- All poultry must get some grit. The animals must be able to drink from open water sources, at least cups. Geese and turkey need green pasture during the vegetation phase. Demeter pasture geese need at least 35% of the feed dry matter as fresh pasture. Ducks must be able to dabble to take up feed.
- The respective organisation may allow the purchase of certified organic fodder for poultry in amounts up to 50%, if no Demeter fodder is available. The unavailability has to be proven. (APP 12: see Appendix 7)
- The respective certifying organisation may allow a reduction of the on-farm proportion for poultry keeping farms with less than 350 animals and insufficient arable land to reach the minimal proportion of 50% of on-farm production, please compare to chapter 6.3.6.1..

6.3.7. Breeding and identification

6.3.7.1. Breeding

A principle of the biodynamic method is the keeping of male sires on the farm, and is therefore highly recommended. Artificial insemination cannot fully replace the effect of the male influence in the farm herd, and is not recommended. It is not permitted to produce animals using genetic manipulation, or by the use of biotechnology (embryo transfer, sperm separation for sex determination).

6.3.7.2. Identification of stock and record keeping

All farm-bred and brought in stock must be unequivocally and permanently identified with an earmark, or other marking. For poultry and other small livestock, group identification is

adequate. Brought in animals must be accompanied by a certificate stating their origin. It must be possible to trace the animals back to the farm on which they were born, and to their parents.

A stock management diary is to be kept (see also section 6.3.10 Veterinary treatment of animals) which allows reconstruction from birth to the point of sale. Documents, which contain the same information (for instance a herd book), can replace the stock management diary.

6.3.8. Origin of animals, brought in stock and marketing

6.3.8.1. Animals brought in for breeding or herd expansion

Brought in stock for breeding or herd expansion should in preference come from certified biodynamic enterprises. Only if they are not available may animals from certified organic farms be brought in. When animals from organic farming are not available the respective certifying organisation can grant an exemption for animals from conventional farms to be brought in (up to a maximum of 40% of the herd). (APP 17: see Appendix 7)

All purchased conventional ruminants must have a confirmation, that they were not fed with animal meal or meat-bone meal, if not already excluded by national law.

For minimum requirements for marketing under Demeter please see the tables under 6.3.8.3. and following.

6.3.8.2. Animals brought in for fattening

Animals brought in for fattening to yield meat for sale with the Demeter logo shall come exclusively from Demeter enterprises, and only if unavailable may be sourced from certified organic enterprises. Regarding the minimum periods of time required to achieve Demeter certification for meat and other products, please see following tables.

6.3.8.3. Milk, dairy cows and calves, beef cattle for fattening

The Certification status of Milk and dairy products always follows the certification status of the feed.

- If single dairy cows of conventional origin are brought in their milk may be marketed as Demeter or "In conversion to Demeter", depending on the certification level of the feed, after 6 months of feeding and management to this standard.

- Brought in animals for breeding from certified organic farms may be marketed as Demeter after feeding and management to this standard for at least 12 months.
- Brought in beef cattle for fattening, of organic origin, must be fed and managed for at least 2/3 of their lives according to this standard if they are to be marketed as Demeter.
- Calves brought in for rearing on nurse cows should be drawn preferably from Demeter farms. If this is not possible, they must come from certified organic farms. Calves for breeding that come from conventional management brought in only with an exemption to be approved by the respective certifying organisation (APP 17: see Appendix 7).

Tab.: 13 / Labelling of products from animals brought in from organic or conventional origin

| Product for sale Cattle | Certification status of the animal on arrival | Fed and managed to the standard | Labelling of the sale product |
|---|---|------------------------------------|----------------------------------|
| Milk | Organic | — | Demeter |
| Milk | Conventional | 6 months | Demeter |
| Beef from fattening cattle | Organic | At least 2/3 of their lives. | Demeter |
| Beef from breeding/fattening cattle | Conventional | At least ¾ of their lives | Demeter |
| Beef from breeding cattle | Organic | At least 12 months | Demeter |

6.3.8.4. Sheep and goats

The order of rank described in section 6.3.8.1 regulates brought in stock.

Milk from brought in conventional breeding stock may be marketed under the Demeter trademark after 6 months.

Tab.: 14 / Labelling of products from brought in animals of organic or conventional origin – sheep and goats

| Product for sale Sheep and goats | Certification status of the animal when brought in | Feed and management conforming to the standard | Labelling of the sale products |
|--|--|--|-----------------------------------|
| Milk | Organic | - | Demeter |
| Milk | Conventional | 6 Months | Demeter |

| Product for sale Sheep and goats | Certification status of the animal when brought in | Feed and management conforming to the standard | Labelling of the sale products |
|--|--|--|--------------------------------|
| Meat | Organic | At least 6 Months | Demeter |
| Meat | Conventional | More than 12 Months | Demeter |
| Wool | Organic or conventional | More than 12 months | Demeter |

6.3.8.5.Pigs

The order of rank described in section 6.3.8.1 restricts the purchase of female “young stock” and the other basic requirements.

- Bringing in of piglets for fattening should preferably be from Demeter enterprises. If unavailable, animals from farms certified organic may be obtained.
- Piglets of conventional origin may only be brought in with an exemption approved by the respective certifying organisation (APP 18: see Appendix 7).
- Newly weaned piglets of conventional origin weighing less than 25 kg may be brought in to start a new herd. Pigs which were brought in as conventional piglets may only be sold with the labelling "In Conversion to Demeter" on the carcass if they have been fed and managed on the farm to this standard for at least 6 months. The piglets must weigh less than 25 kg; i.e. they have to be brought in directly after weaning.
- Only piglets from management systems using floor litter and with undocked tails may be brought in.
- Immuno-castration is not allowed, as well as the purchase of immuno-castrated animals.

Tab.: 15 / Labelling of products from brought in animals of organic or conventional origin – pigs

| Product for sale Pigs | Certification status of the animal when brought in | Age when brought in | Feed and management conforming to the standard | Labelling of the sale products |
|---------------------------------|--|--|--|--------------------------------|
| Meat | Organic | | At least 1/2 of life | Demeter |
| Meat | Conventional | Piglets less than 25kg, directly after weaning | At least 6 months | In conversion to Demeter |
| Meat | Conventional (Breeding animal) | | At least 2 years | Demeter |

6.3.8.6. Poultry

- Cockerels for meat or other meat poultry, are to be brought in as “day old chicks” that means they must have left the breeding house at the latest 3 days after birth.
- Brought in poultry comes in preference from certified biodynamic enterprises. Only if they are not available may animals from certified organic farms be brought in.
- When not available also from organic farming the respective certifying organisation can allow “day-old” chicks for meat to be brought in from conventional farms (APP 19: see Appendix 7).
- Meat poultry of conventional origin which is fed and managed to the standard can be marketed as Demeter. The minimum time limits for slaughtering are to be met (see Appendix 8).
- Slow growing breeds are to be preferred.

Tab.: 16 / Labelling of products from brought in animals of organic or conventional origin - poultry

| Product for sale Poultry | Certification status of the animal when brought in | Age when brought in | Feed and management conforming to the standard | Labelling of the sale products |
|--|--|---------------------|--|--------------------------------------|
| Eggs | Organic pullets | 18 Weeks maximum | The same certification status as the feed | Demeter/ In conversion to Demeter |
| Eggs | Conventional day old chicks | 3 days maximum | The same certification status as the feed | Demeter/ In conversion to Demeter |
| Meat poultry (including brother chicken of layer hens and layer hens for meat) | Conventional day old chicks | 3 days maximum | From arrival to slaughter (slaughter age see Appendix 8) | Demeter |
| Meat poultry (including brother chicken of layer hens and layer hens for meat) | organic | | ½ lifetime | Demeter |

6.3.9. Veterinary treatment of animals

Animal health is primarily to be assured by observant animal husbandry, breeding and feeding, choosing the right breed, as well as through the use of prophylactic measures such as management appropriate to the livestock species. If however health problems occur, treatment to alleviate the condition must be given immediately. If the treatment is under direction of a vet, and documented exactly, the remedy chosen may deviate from these guidelines in order to find the best solution for animal health, management of resistance and environmental aspects.

6.3.9.1. General requirements for all animals

Routine and/or prophylactic treatment with materials that are not termed natural remedies (e.g. synthetic allopathic medicines, antibiotics, anthelmintics) is not permitted unless legally required. An exception to this is the use of permitted anthelmintics (see below) in those cases where parasitism is endemic in the area in which the farm is located.

Every treatment given to an individual animal, or to the herd as a whole, no matter what the treatment was, is to be recorded in detail in the appropriate farm records. This record must state, for each treated animal, the treatment, the method, the medicine used, the withholding time and the date of treatment. These records are to be kept and made available when requested.

- When using veterinary allopathic remedies, twice the legal withholding period, at least 48 hours if there is no waiting period mentioned, is to be observed. (Except in the case of a negative bacteria inhibiting test following the use of antibiotics.)
- Animals with a productive life of less than one year may have only one course of treatment with allopathic remedies, all other animals may have 3 treatments per year.
- If any animal receives more than the permitted number of treatments, or is treated with a non-permitted material, it is not to be marketed as Demeter.
- Remedies containing organophosphate materials and treatments with hormones to synchronise oestrus or to increase the growth rate or production of animals are not permitted.

6.3.9.2. Use of remedies for large and small Bovids, Camelides, Equids, Deer and Sows

Antibiotics: The aim is to be largely free of antibiotics, with use occurring only in pure emergencies. Individual animals may receive a maximum of three courses of treatment per

year. They may not be used prophylactically and only under the direction of a vet. Antibiotics of critical importance for human medicine may only be used as a last resort. In cases of persistent herd problems, it is highly recommended to consult with a professional in order to improve herd resilience through the breeding programme

Ecto-parasites: Individual animals may receive only one application per year of Ivermectin/Doramectin for the treatment or prevention of miasis and scabies. Whole herd treatment is permitted only with other remedies for ecto-parasites.

Pyrethroids, as local applications (no whole animal dipping), are permitted for ticks, horn flies, dermatobia etc. Other solutions must be integrated into control measures. Spinosad for lice and/or miasis control in sheep/goats is permitted.

Internal parasites: Anthelmintics may only be given in conjunction with a diagnosed presence of parasites, and an appropriate clean-pasture grazing regime. Whole herd treatment is permitted but the use of Ivermectins and doramectins are generally excluded as remedies for internal parasites with the exception of liver fluke and oestrus ovis if there are no alternative materials available. Oral administration is preferred; pour-on or injectable administration is permitted only as a last resort under the direction of a vet.

6.3.9.3. Additional requirements for poultry, fattening pigs, rabbits and other small animals

The prior requirements apply also for poultry, fattening pigs, rabbits and other small animals, unless they are not exclusively mentioned for a specific species. In the case of an outbreak of disease in poultry, small animals and fattening pigs, the whole flock may be treated. Fattening pigs and rabbits may receive only one application per year of Ivermectin/ Doramectin for the treatment of scabies.

6.3.10. Transport and slaughter of stock

One should be conscious of the fact that the death of a living being with a soul precedes all meat processing. Ethical and moral viewpoints require that the animal in question be handled, during transport and slaughter, such that it doesn't suffer fear and stress. Transport distances should be minimised by slaughtering animals locally. Animal slaughter will not be covered in detail in this standard. The endeavours of the individuals involved, who must act with insight, and the principles mentioned above, stand in their place.

- The use of electrical goads is forbidden, as is the use of sedatives or other chemical or synthetic materials, before, during or after transport.

- Waiting times at the slaughterhouse should be kept as short as possible. If waiting is required, sufficient covered space must be available.
- The animals are to be given sufficient food and water during the waiting time.
- The animals are to be quickly and effectively stunned. After stunning they must be allowed to bleed completely.
- Throat cutting regulations that are to be found in some religions are allowed for that consumer group, providing the above mentioned standards are respected (with the exception of stunning).

6.4. Conversion of a farm

6.4.1. Conversion plan

The conversion of a farm to a biodynamic farm should begin by defining the developmental aims of the enterprise. This must then inform the development of a conversion plan which contains details of the farm and how they can be managed to biodynamic aims and standards.

Minimal requirements and recommendations for certifying organisations in connection with conversion plans and cooperation with consultancy in the context of conversion are to be found in the Quality Management Manual of BFDI.

For Federation Licensees (certified by the International Certification Office)

Producers starting conversion must submit a written conversion plan. Farms of more than 5 ha must have the support of a recognised Demeter advisor for this purpose. (please see <https://www.biodynamic-advisors.org/> for a current list)

6.4.2. Conversion of the entire farm

The enterprise is to be converted in its entirety, in one step, to the biodynamic method. This condition applies to the whole farm organism, including livestock, even if animal husbandry would not be compulsory under this Standard for the type of farm (perennials and market gardens less than 40 ha) concerned, but is nevertheless present.

Conversion is only possible, if there is clear evidence that the areas were not created by clearing virgin rainforest or areas of high conservation value after the year 2020.

If farms are unable to meet this requirement during conversion, the conversion plan must be extended to include appropriate compensation measures, at least reforestation of the size of the affected area by a factor of 1.5; compensation areas must be located on the company premises or in the directly adjacent area. Please compare also to chapter 6.1.9.1..

In the case of larger structures such as cooperatives or farm mergers, it is possible to define partial areas as farm organisms. It is the responsibility of the respective certifying organisation to define these areas according to regional specifics, like:

- Distinction by legal units
- Classification according to organic certification
- Physically logical separation including storage areas and packing units

However, it must follow transparent, controllable and comprehensible rules and the subdivision must not serve the purpose of circumventing certain areas of this Standard.

The farm manager may not manage a Demeter farm and a conventional farm simultaneously.

Where it can be justified the conversion period of certain areas / animal husbandry can be prolonged under the following circumstances:

- Prolonged certification periods up to five years from the first year of conversion are only possible for perennials and ornamental plants.
- The perennials and ornamental plants that are not yet Demeter certified must be managed to organic standards.
- If a comprehensive separation protocol is in place, the certifying body may allow parallel production for perennials and ornamental plants within the five years.
- Precise documentation is needed at every stage of the process.
- Animal husbandry can be managed conventionally up to three years within the conversion period, but only if this part of animal husbandry is subsequently abandoned and it is no longer acceptable to rebuild the barn or to build up a standard compliant on-farm fodder share.
- Animal husbandry can be managed organically up to five years during the conversion period, if essential constructional adaptations are required for complying with this Standard.
- Please note specific conditions for the replacement-breeding of genetically polled cattle in the conversion phase under chapter 6.3.5.1.
- The entire enterprise must reach Demeter certification no more than five years after conversion is begun.

Prolonged conversion, parallel production in perennials and non-organic husbandry in conversion needs an exemption from the respective certifying organisation. Exemptions require a written reasoning (App 20: see Appendix 7).

6.4.3. Conversion of new agricultural areas

The conversion of newly added land due to an expansion of cultivation differs in some respects from the conversion phase of new farms.

Conversion of new areas is only possible, if there is clear evidence that the areas were not created by clearing virgin rainforest or other areas of high conservation value after the year 2020, please compare also to chapter 6.1.9.1.

In contrast to the restriction for parallel production under 6.4.2 in the total farm conversion, the parallel cultivation of organic, Demeter in conversion and Demeter is permitted for the same type of fodder plants and perennials. A descriptive separation protocol concerning harvest and storage is required in any case.

The provisions under 6.4.4. concerning the conversion periods depending on the crop and the preliminary cultivation of the newly acquired land apply without restriction.

Production of the same (species of) annual crop on areas carrying differing levels of certification leads to downgrading to the lower status of the whole crop.

6.4.4. Certification in conversion periods

6.4.4.1. Normal conversion

In general, the following time frames and periods represent the respective ideal case of conversion periods. In case of deviations or non-conformities the respective certifying organisation can at any time prolong the conversion period.

The prerequisite for conversion certification is management of the whole enterprise to this standard, as defined in the section “Conversion”. The use of the trademark is then governed by the following time line (Table 1):

- Marketing of produce from the first conversion year with labelling that implies that it is a product of organic agriculture e.g. “from organic production” or “from biodynamic production” or similar wording is not allowed.
- Produce harvested 12 months after the start of conversion, may, if certification has been granted, be marketed as “In conversion to Demeter”.

- Crops harvested more than 36 months (perennial crops), or sown more than 24 months after the start of conversion can be marketed as “Demeter” once certification is granted.

These time periods may be extended in exceptional cases. If an enterprise or part of an enterprise has been intensively conventionally farmed, a so called zero year may precede the above listed times.

Tab.: 17 / : Normal conversion, prior conventional farming

| | | | |
|--|--|---|---|
| | | | Full certification |
| | | 12 Months | |
| | 12 Months | Harvest = demeter (crops sown 24 month after the start of the conversion) | Harvest = demeter (perennial crops*) |
| 12 Months | | or Harvest = “In conversion to demeter ” (perennial crops*) | |
| Biodynamic standard has been met | Harvest = “In conversion to demeter ” | | |
| 0 (Starting point)** | 1 | 2 | 3 Years |

Point of time 1: 12 Months after the conversion has started; products harvested from this time on can carry the certification “In conversion to Demeter”

Point of time 2: 24 Months after the clock begins; products sown 24 month after the start of conversion can be marketed as “Demeter” once certification is granted. Perennial crops harvested from this time on can carry the certification “In conversion to Demeter”.

Point of time 3: 36 Months and longer after the conversion has started; Products harvested from perennial crops can carry the “Demeter” certification.

* Grassland or perennial green manure are not considered as perennial crops

** The starting point of a conversion certification can be defined differently by respective certifying organisations, e.g. signing of a conversion contract or approval of a conversion plan. In any case the conversion cannot start before all requirements of this Standard are met

Federation Licensees (certified by the International Certification Office)

The conversion period starts with the approval of the conversion plan.

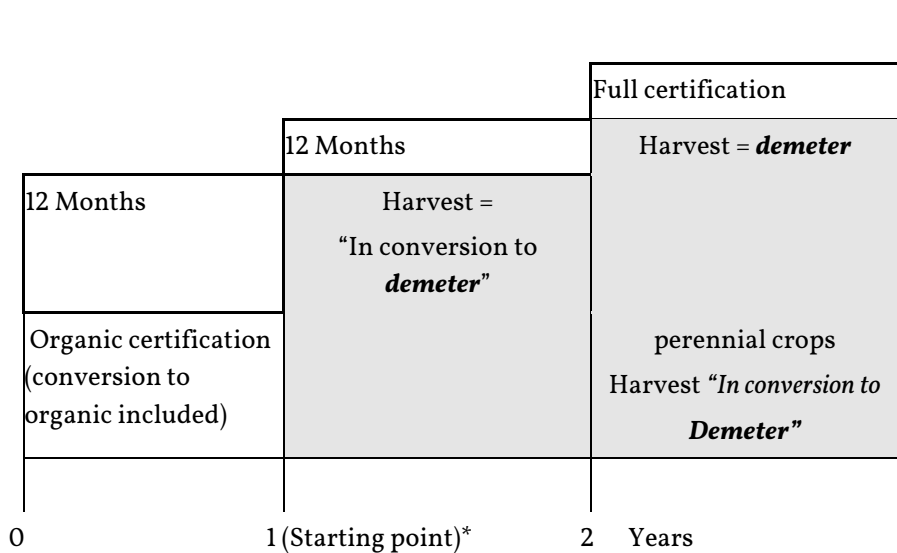
6.4.4.2.Semi-fast and fast conversion

The time periods described above may be shortened in exceptional cases:

- If an enterprise or major part thereof has been certified organic (conversion time included) for a minimum of one year, “Demeter in conversion” certification can be given for the first harvest, provided that full compliance with all provisions of this standard (including complete preparation usage, see also 6.2.) have been confirmed at the inspection. Full certification is possible in the second year of the conversion. Perennials respectively one year later.
- If an enterprise or major part thereof is certified organic (conversion time included) for a minimum of three years before the start of the conversion, full Demeter certification can be given for the first harvest provided that full compliance with all provisions of these standard (including complete preparation usage) have been confirmed at the inspection.
- Partial conversion and new areas follow the above regulations with the additional requirement for documentation.

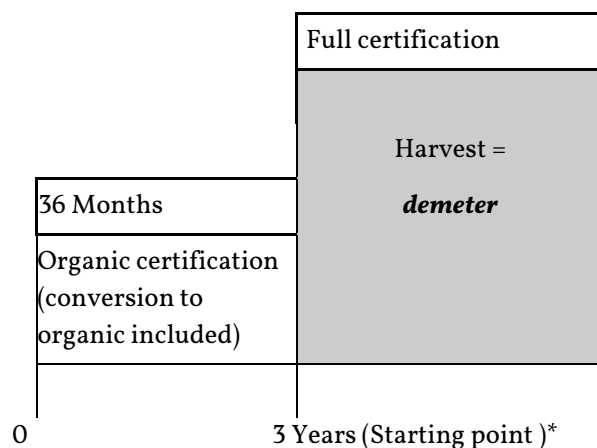
For animal products, certification corresponds to the certification status of the fodder. See the tables listed in 6.3.8.

Tab.: 18 / Semi fast conversion, prior organic farming for a minimum of one year



* The starting point of a conversion certification can be defined differently by respective certifying organisations, e.g. signing of a conversion contract or approval of a conversion plan.

Tab.: 19 / Fast conversion, prior organic farming for a minimum of three years



* The starting point of a conversion certification can be defined differently by respective certifying organisations, e.g. signing of a conversion contract or approval of a conversion plan.

6.4.4.3. Conversion of perennials in the tropics and subtropics

Since some perennial crops in the tropics and subtropics are harvested continuously under certain circumstances, the orientation with regard to the first harvest is not significant. For this reason, other reference points apply here.

If an enterprise or major part thereof is certified organic (conversion time excluded) for a minimum of one year “in conversion to Demeter” certification can be given (all three preconditions have to be fulfilled):

- at the earliest 12 months after the start of the conversion (conversion or trademark contract signed);
- at the earliest 6 months after the first full application of the preparations;
- at the earliest 3 months after the first inspection with positive evidence of compliance with the Standard without major non-conformities;

If an enterprise or major part thereof is certified organic (conversion time excluded) for a minimum of three years full Demeter certification can be given (all three preconditions have to be fulfilled):

- at the earliest 12 months after the start of the conversion (conversion or trademark contract signed);
- at the earliest 6 months after the first full application of the preparations;

- at the earliest 3 months after the first inspection with positive evidence of compliance with the Standard without relevant non-conformities;

Tab.: 20 / Specific conditions for perennials in tropic and subtropic climates – fast conversion

| | | | |
|--------------------|---|------------------|---|
| | | | Full certification |
| 12 Months | | | Harvest = <i>demeter</i> (perennial crops) |
| 9 Months | | First inspection | |
| 6 Months | Full round of application of the preparations | | |
| | | | |
| | | | |
| 0 (Starting point) | 0,5 | 0,75 | 1 Year |

6.5.Bee culture and hive products

6.5.1.Principles of Biodynamic Beekeeping

Bees have been a part of human culture since the earliest times. The social organisation of the colony, the relationship of bees to light and their ability to live from blossoms is a cause for reverence and admiration. Bee colonies are however dependent on human care today. Strengthening the hives is an important goal of Demeter bee keeping.

The extent of their flying range and the current management of agricultural land means that bees cannot be expected to fly solely or predominantly over biodynamically managed areas. What is essential for Demeter Beekeeping is therefore not the direct link to forage grown on the farm as is the case with other livestock, but the way in which bees are kept and how closely this allows them to express their innate behaviour.

Beekeepers working in the context of Biodynamics orientate themselves primarily towards meeting the natural requirements of the colony. Management is so structured that the bee is able freely to unfold its true nature. Demeter beekeepers allow the colonies to build natural honeycomb. The basis for their reproduction, growth, rejuvenation and breeding is the process of swarming. Its own honey is the mainstay for supporting the colony through the winter.

Due to their activities as pollinators and as carriers of bee poison which has such a stimulating effect on the life of plants and of nature, bees are of great importance to the whole web of life. The beneficial effects of having bees in the cultivated landscape can be experienced in the increased yield and quality of many farmed crops. Their presence is therefore very important and the keeping of bees is recommended for every Biodynamic holding.

6.5.2.Bee Management

6.5.2.1.Location of apiaries

Biodynamically and organically managed land or uncultivated and wild areas should be selected as preferred sites for setting up beehives.

If the location of the apiaries is not on Demeter certified land, the spray preparations have to be applied to the immediate surroundings. This applies to all sites that are used for more than three months.

Only so many beehives may be established at a given site as can assure each colony an adequate supply of pollen and nectar.

In choosing a site great care must be taken to make sure that environmental pollutants will contaminate the hive produce on the lowest possible level. For procedures concerning potential contamination of bee products please compare to chapter 2.7. Residues.

6.5.2.2. Beehives and combs – permitted and not permitted measures

With the exception of fixings, roof coverings and wire meshing, hives must be built entirely of natural materials such as wood, straw or clay.

- The inside of the hive may only be treated with beeswax and propolis obtained from Demeter beekeepers.
- Only natural, ecologically safe and non-synthetic wood preservatives may be applied to the hive exterior.
- The cleaning and disinfection of hives may only be undertaken using heat (flame or hot water) or mechanically.

The comb is integral to the beehive. Therefore, all combs should be constructed as natural combs. Natural combs are those constructed by the bees without the help of waxed midribs. Natural combs can be constructed on fixed or movable frames.

- Strips of beeswax foundation to guide comb building are permitted.

The brood area naturally enough forms a self-contained unity. Both comb and brood area must be able to grow as the bee colony develops through building more natural comb. The brood chamber and frame size must be so chosen that the brood area can expand organically with the combs and without being obstructed by wood from the frames.

- A restriction of the movement of the bee queen is not permitted, queen excluders can only be used during the conversion period. After conversion only in well justified, exceptional cases based on an exemption. The respective certifying organisation has to specify conditions for approving exemptions. (APP 21: see Appendix 7)
- Only in the supers may waxen midribs be used. It is nonetheless desirable to avoid their use here too.
- Paraffin wax, carnauba wax and any other kind of wax are not allowed
- Wax used for guiding strips or midribs must be natural comb or capping wax and sourced from Demeter beekeepers. When unavailability is proven, comb or wax from organic certified sources may be used.

A bee colony should be able to correct any occurring imbalances out of its own resources. Measures taken by the Demeter beekeeper should aim to reinforce and maintain its vitality

and capacity for self-regeneration. The occasional loss of colonies particularly susceptible to certain pests and diseases should be accepted as a necessary part of natural selection.

- Permitted measures and inputs for the control of parasite or pest pressure are:
 - Warmth treatment
 - Brood removal
 - Herbal teas,
 - Formic acid, acetic acid, lactic acid, oxalic acid,
 - Non-transgenic bacillus thuringiensis,
 - Sodium carbonate for disinfecting of ‘American Foul Brood’
 - Absconding – complete separation of the colonies from the honeycomb and the brood (to build up a new unencumbered comb)
 - Queen caging and queen banning
 - Icing sugar or powdered starch to powder the bees
 - Salt

6.5.2.3.Reproduction – permitted and not permitted measures

Swarming is the natural way to increase the number of bee colonies and is the only permitted means for increasing colony numbers.

- Pre-empting swarming by creating an artificial swarm with the old queen is allowed. For the further increase the remainder of the hive can be divided into secondary pre-empting swarms or scions.
- As with all forms of livestock management some selective breeding is necessary. The production of queen cells is part of the swarming instinct. For selective breeding activity and in the event of pest control the exchange of the old queen is allowed provided that the new queen originates from the swarming process.
- Multiple and routine uniting of colonies as well as systematic queen replacement is not permitted.
- In the case of africanised bees, due to their marked tendency to swarm, artificial division of the swarms is not allowed. The procedure to increase or replace swarms should be carried out by “invitation boxes”.
- Artificial queen breeding (grafting etc.) is prohibited. Instrumental insemination and the use of genetically modified bees are prohibited.

- Clipping the wings of queens is prohibited.

A locally adapted breed of bee suited to the landscape should be chosen. The system of management cannot rely on the continual introduction of colonies, swarms and queens from elsewhere. Any bees or queens purchased must wherever possible stem from Demeter beekeepers. If these are not available, they may be sourced from organically certified beekeepers. Colonies of non-organic origin are not permitted. The integration of natural – naked swarms is permitted.

6.5.2.4. Feeding

Honey and blossom pollen are the natural foods for bees. During periods when permanent feeding on nectar is not possible due to the vegetation phase, the aim should be to feed them with own honey. Where this is not possible a suitable proportion of honey must be added to the supplementary feed in order to achieve a rapid inversion of the feed. As an orientation 10 % honey (by weight to the sugar) is an appropriate quantity. Depending on the climatic conditions and the respective vegetation phase, national certification organisations may request higher amounts of honey. In the event of significant lower amounts, like for example in the case of lactic fermented feed, the reasoning has to be substantiated in the inspection.

- Camomile tea and salt are also to be added to the supplementary feed.

If emergency feeding is required later in the season and before the last harvest of the year, only Demeter honey should be used. The use of sugar is not allowed in such rations.

- In order to build up the strength of swarming bees and those remaining behind, feeding may be carried out as described above for supplementary feed.
- All pollen substitutes are forbidden.
- No form of stimulative feeding is permitted.

6.5.3. Processing and packaging

6.5.3.1. Principles of processing

As a rule the annual harvest should be filled immediately after extraction into the jars which it is to be sold in, before any solidification occurs. Since subsequent refilling, repeated warming and longer storage periods effect significantly the quality of the honey, it should be avoided whenever possible. In the event that yields of particular kinds of honey exceed the average amount sold during a year, honey may be stored in larger containers and transferred later into jars for retail.

6.5.3.2. Processing – permitted and non-permitted measures

During the extraction, pressing, sieving, purifying and subsequent bottling of the honey, temperatures must not exceed 35°C (indirect heat).

- Also, for the downstream decanting of the honey after storage, the temperature must not be higher than 35°C (indirect heat). Under no circumstances may the honey be liquidised.
- Pressurised filtration is not permitted.
- The water content (measured according to DIN/AOAC) may not exceed 18% in temperate climate and 20 % under humid climatic conditions and for heather honey 21.4%.
- The HMF content (measured according to Winkler) may not exceed 10 mg/kg.
- The Invertase level (measured according to Hadorn) must be at least 10 (except honeys with a low content of enzymes like honey from acacia).
- Wax must not come into contact with solvents, thinners, bleaching agents or other similar materials. Equipment and containers used must be made of non-oxidising materials or with non-oxidising coating.

6.5.3.3. Packaging

- Honey must be stored under airtight, dark conditions at a steady cool temperature.
- Permitted materials for storage, transportation and retail are glass, metal, stoneware, food grade clay and porcelain.
- Plastic containers are not permitted, neither for storage and transportation nor for retail.

All labelling requirements for bee products are to be detailed in the labelling section of this Standard (see sections 4.1 and 4.5.1).

6.5.4. Conversion

The requirements concerning a conversion plan according to chapter 6.4.1. Conversion plan apply.

- "In conversion to Demeter" status may be granted if the requirements of this Standard have been met for at least 12 months.
- In the first year of conversion, the wax in the combs must be analysed with regard to undesirable contaminants from the prior non-organic management. In the event that

thresholds are exceeded, wax has to be removed and replaced by wax of biodynamic origin, if unavailable of organic origin.

- A conversion period applies in all cases, especially if the beekeeping is established only with the beginning of certification.
- Standard conversion period for full certification is three years, in the event of prior organic management of at least three years, the respective certifying organisation can shorten the conversion period.
- A gradual conversion of apiaries with more than one site is possible, when the conversion plan contains a correspondingly compelling separation protocol. The separation protocol must cover the sites including the migratory plan as well as storage and processing. Hives with a different certification status within a site are not permitted. Conversion period has to be ended after five years at the latest.

During the conversion period

- Partitioned brood chambers
- Queen excluders and
- Existing brood chamber combs made with waxen midribs (at least 1/3 replaced with natural comb after every conversion year)

may be used when documented in the conversion plan accordingly.

6.5.5. Certification, residues and flow of goods

Professional and commercial bee keeping follows the principle of the conversion of the farm as a whole, parallel production of biodynamic and organic honey is not possible, neither on a Demeter farm nor as a stand-alone business. Non-organic bee keeping for self-consumption on a Demeter farm is possible. Bee keeping for commercial purposes on a Demeter farm has to be at least certified organic. In cases where an organic certification of honey is not possible due to national regulations and circumstances, this regulation does not apply.

In the event of bee management on the area of a biodynamic farm under responsibility of a third party (guest bee keeping), the requirement of at least organic certification does not apply. The respective certifying organisation can request written agreements to specify such arrangements. The respective certifying organisation has to ensure that in these cases preference is given to biodynamic beekeepers, if those exist.

- For the certification chapter 2.6. Certification applies.
- For the identification of beehives, documentation of seasonal hive movements, the storage of honey, separation and product flow chapter 2.6.4. Documentation, separation, storage

and product flow and the procedural requirements of the respective certifying organisation apply.

The location of apiary sites (permanent, over wintering and temporary) must be accurately recorded. Seasonal hive movements must be recorded as part of a migratory plan. Minimal requirements for a migratory plan are unique identification of the bee colonies, description of the respective forages and periods of stay.

Concerning residues in the beehives and the respective chapter 2.7. Residues as well as the respective certifying organisation and the legal organic basis give a ruling.

Appendix 1: Calculation of the stocking rate

One manure unit corresponds to 80 kg N and 30 kg P (=70 kg P₂O₅). One livestock unit (e.g. a cow with a nominal live weight of 500kg) excretes 0.7 manure units in a year.

Tab.: 21 / Calculation of stocking rate

| Animal type | Livestock Unit/Animal | Manure Unit |
|---|-----------------------|-------------|
| Breeding bulls | 1.2 | 0,84 |
| Cows | 1.0 | 0,7 |
| Cattle over 2 Years old | 1.0 | 0,7 |
| Cattle 1-2 Years old | 0.7 | 0,5 |
| Calves | 0.3 | 0,21 |
| Sheep and goats up to 1 year old | 0.02 | 0,014 |
| Sheep and goats over 1 year old | 0.1 | 0,07 |
| Horses under 3 Years old, ponies and small breeds | 0.7 | 0,5 |
| Horses, 3 years and older | 1.1 | 0,77 |
| Pigs for meat production (20-50 kg) | 0.06 | 0,042 |
| Pigs for meat production over 50 kg | 0.16 | 0,11 |
| Breeding boars | 0.3 | 0,21 |
| Breeding sows (including piglets to 20 kg) | 0.55 | 0,39 |
| Breeding sows without piglets | 0.3 | 0,21 |
| Piglets | 0.02 | 0,014 |
| Laying hens (without replacement stock) | 0.0071 | 0,005 |
| Pullets | 0.0036 | 0,0025 |
| Table birds (chickens, Cockerels for meat) | 0.0036 | 0,0025 |
| Ducks for meat | 0.005 | 0,0035 |

| Animal type | Livestock Unit/Animal | Manure Unit |
|------------------|-----------------------|-------------|
| Turkeys for meat | 0.0071 | 0,005 |
| Geese for meat | 0.0036 | 0,0025 |

For those animals which produce differing amounts of manure because of their breed or production level, adjustments up or down are to be made.

The manure units are to be calculated on the average number of animals stocked on the farm during the year

Appendix 2: Allowable brought in feeds

Fodder produced on the farm forms the basis of animal nutrition; complete self-sufficiency is the aim. If, however, fodder must be imported, particular care must be exercised that the choice is appropriate to the production of Demeter quality products. Brought in feeds are to be chosen in the following priority: 1) fodder from certified Demeter enterprises, 2) from enterprises certified organic which is a member of a certified organic organisation, 3) from enterprises certified according to the regulation (EU) 2018/848 or comparable organic regulations 4) from extensively managed areas including nature reserves, which must have had no use of synthetic fertilisers or plant protection chemicals.

Concerning the Demeter shares, on-farm shares, organic and in-conversion shares of the respective feed ration, please compare to chapter 6.3.6.1. On farm production – Demeter share for all animals.

New materials and processing methods for animal feeding may be trialled only with the agreements of the Federation's Standards Committee based on a country exemption.

Imported feeds must be documented and be declared as part of the annual return proving that the standard has been followed.

a) Ruminant diets:

- Basic staple feeds like hay, straw, silage, maize and beets
- grain, bran, Grain offal
- Pulses
- Hay made from foliage
- Herbs
- Molasses
- Grassland and arable products not mentioned elsewhere
- Fodder mixes containing the above mentioned ingredients
- Waste of fruits and vegetable
- Milk and milk products
- By-products of processing (other products than milk and milk products of animals are excluded)

b) Pigs :

- In addition to a) above the following may be used:

- Milk, milk products and skim milk powder without additives
- Plant oils of natural origin (providing there is no concern about residue levels)
- Clean vegetable waste
- Whey and eggs

c) Poultry:

- In addition to a) and b) above the following may be used:
- milled dried herbage
- Paprika powder

d) Emergency cases

The following brought in conventionally produced basic, staple feeds to meet structural and energy requirements may be used in cases of need (e.g. unforeseeable occurrences such as natural catastrophes, damage due to fire etc.) with approved exemptions from the inspection body and not genetically modified:

- Staple fodder such as hay, grass silage, as far as possible from enterprises of low production intensity
- Grain and by-products from grain processing and grain offal's from milling
- Legumes; (no extraction cake)
- Oil seeds, oil press – cake, expeller cake
- Fodder beet

This procedure under d) is subject to approval as an exemption by the respective certifying organisation (App 22: see Appendix 7).

Appendix 3: Processing of feed - feed supplements and additives

New materials and processing methods for animal feeding may be trialled only with the agreement of the Federation's Standards Committee based on a country exemption.

3.1. Processing of feed

Feed, feed components or feed mixtures may be supplemented with raw materials from organic or in conversion sources due to the unavailability of biodynamic raw materials as defined in Appendix 2 and Chapter 3.1.3. However, they must not have undergone any processing or contain additives not covered by this Standard (defined for the processing of Demeter food in chapter 3.3. of this Standard).

When feed or feed components with a reference to Demeter or biodynamic are supplied to farms or customers in general, the general rules for product approval and the Labelling Standard apply.

Premixes must not contain any genetically modified substances, or be produced with the help of gene technology.

3.2. Additives and feed extenders

Additives or feed extenders which are permitted or permitted with restrictions:

- Stock salt
- Calcified seaweed, feed lime, lime from seashells
- Seaweed
- Mixtures of minerals and vitamin preparations (= Premix: no individual amino acids, preferably of natural origin)
- Rock flour, Cod-liver oil (Non-herbivores only), carob
- Plant oil, bran, brewer's yeast, molasses as a carrier in mineral concentrates or as an aid to reduce dust, or as an aid in pressing (max. 2% of the feed ration)
- For beekeeping: sugar (Please compare also to chapter 6.5.2.4. Feeding).

3.3. Aids for the silage-making process

The following are allowed as aids in the silage-making process:

- Feed grade sugar
- Grain meals from grain produced to this standard
- Lactic acid promotion agents

- Whey
- Molasses, salt, wet and dry cuttings

To ensure the quality of silage in years with bad weather conditions:

- Organic acids (GMO-free)

3.4. Processing methods for feed

All processing methods permitted for food according to this standard are also permitted for feed. In addition, the following is permitted:

- Extrusion of soy bean

Appendix 4: Permitted/restricted fertilisers and soil conditioners

Introduction

In principle, the enterprise is to aim for self-sufficiency in its manures and fertilisers. Bringing in substrates, fertilisers and soil conditioners listed below may only be as demand dictates. The use of brought in materials requires particular care with respect to their effects on the quality of Demeter products. The biodynamic preparations are to be used if possible. Brought in materials are to be declared in the annual certification procedure. In some cases, the results of a residue test are to be supplied (e.g. for compost from green waste).

Appropriate systems must be applied to prevent the contamination of certified land by residues of veterinary remedies, feed additives such as antibiotics, natural feed contaminants such as mercury in fish meal and other residues such as herbicides/pesticides in green waste.

Any use of a material not permitted by this Standard leads to decertification of the farm, or at least of the treated crops and areas. See also chapter 3.7.

New fertilisers and soil conditioners may be trialled only with the agreement of the Federation’s Standard Committee based on a country exemption.

For Federation Licensees (certified by the International Certification Office)

All commercial inputs which are not clearly covered by Appendix 4 have to be approved by FiBL (Germany) according to this standard.

Commercial fertilisers with nitrogen must be approved by FiBL Germany for the BFDI guideline; natural nitrogen fertilisers with <5% N can be exempted until further notice.

1. Fertilisers and Soil Conditioners

brought in from Demeter or organic certified sources

Permitted

| Description | Additional requirements |
|-------------|-------------------------|
|-------------|-------------------------|

| | |
|--|---|
| <ul style="list-style-type: none"> ■ Compost ■ Farmyard manure, liquid and semi liquid manures from animals ■ Liquid manures from plants ■ Organic wastes (harvest residues etc.) ■ Straw ■ Spent mushroom compost ■ Residues from biogas extraction only if substrates are listed in this section (Demeter or organic sources) | <p>Please note the use of inputs follows the general regime (3.1.2. Origin of raw material) and the principle of availability (3.1.3. Availability of Demeter raw material). In principle every input from a certified Demeter farm can be used. Organic inputs follow the above-mentioned principles and may be further restricted in the following.</p> |
|--|---|

Not permitted

| Description |
|--|
| <p>In general, this standard is designed as a positive list, what is not allowed is prohibited. Nonetheless, a number of prohibited means are mentioned in order to provide the necessary clarity. In cases of doubt, please contact your certifying organisation.</p> <p>In principle every input from a certified Demeter farm can be used. Organic certified inputs from a farm follow the above-mentioned principles of the general regime and availability. Fertilisers and soil conditioners from organic sources in the sense of "certified <u>for</u> organic farming", i.e. commercial inputs are described below and, where appropriate, restricted.</p> |

2. Fertilisers and Soil Conditioners

brought in from non-certified sources or sources outside of the scope of organic regulations

Commercial organic nitrogen fertilisers (note the restricted amounts in chapter 6.1.3.1.):

- fertilisers with a non-mineral nitrogen source, that do not fall under the categories: farmyard manure, imported farmyard manure, green manure or recycled manure (for details please compare to chapter 6.1.3. Fertilisation General)
- which are based on by-products of animal slaughter shall be composted with the preparations before they are applied to the fields wherever national legislation on fertiliser law allows this
- of non-organic origin are permitted until the end of the certification campaign 2028. After this, these fertilisers must be made solely from products derived from organic certified sources.

Permitted

| Description | Additional requirements |
|--|---|
| Farmyard manures from extensive livestock | <ul style="list-style-type: none"> ■ as far as possible prepared at the place of origin or on the farm itself ■ extensive: livestock less than 2,5 stock units / ha and permanent daily access to outdoor areas |
| Manure from nomadic livestock | as far as possible prepared at the place of origin or on the farm itself |
| Straw and other plant materials | Please note the use of inputs follows the general regime (3.1.2. Origin of raw material) and the principle of availability (3.1.3. Availability of Demeter raw material). |
| Extracts and preparations from plants | |
| Fish | <ul style="list-style-type: none"> ■ Composted or fermented with the preparations ■ Testing for heavy metals maybe required |
| Seaweed products | to be used sparingly for reasons of resource depletion |
| Water soluble seaweed extracts | |
| Vegetable carbon | |
| Eggshells | |
| Fresh wood products and wooden ash from untreated wood | Saw dust, bark, and wood wastes - as long as they are not contaminated with fungicides and insecticides. |
| Peat | <ul style="list-style-type: none"> ■ without synthetic additives ■ for growing seedlings, ■ in as far as no alternatives are available; |

| Description | Additional requirements |
|--|---|
| | <ul style="list-style-type: none"> ■ to be used sparingly for reasons of resource depletion |
| Bruised castor seeds | |
| Composted municipal green waste | Acceptable residue levels assumed, orientation Regulation (EC) 889/2008 for composted household waste |
| Microbial or plant-based compost activators | |
| Humic and fulvic acids | |
| Soil inoculates | <p>For example:</p> <ul style="list-style-type: none"> ■ grain ferments, ■ N-fixing bacteria, ■ Mycorrhiza, ■ Rhizobia bacteria |
| <ul style="list-style-type: none"> ■ Farmyard manures as dried chicken manure ■ by-products of animal slaughter, such as <ul style="list-style-type: none"> – horn meal, – bone meal, – meat-bone meal, – dried blood, – hair and feather and other similar products ■ Plant or fungi residues or by-products of plant or fungi processing, such as vinasse and melasse or other similar products | In as far as it meets the requirements of the EC Regulation 1069/2009 for Category 3 |
| | Chapter/Section 1./2./3. |

Not permitted

In general, this standard is designed as a positive list, what is not allowed is prohibited. Nonetheless, a number of prohibited means are mentioned in order to provide the necessary clarity. In cases of doubt, please contact your certifying organisation.

| Description | Additional requirements |
|--|---|
| Semi-liquid or liquid manures | |
| Factory fishmeal or fish wastes from fish farming | |
| Guano | From bats and seabirds |
| Animal manures from animals fed with genetically modified fodder | If proof that the manure from animals not fed with GMOs cannot be given or GMO free manure is not available, the respective certifying organisation can give an exemption (APP 1A: see Appendix 7). |
| Compost from general municipal waste | Non-green waste or household waste, solid waste from gastronomy or processing |
| Sewage sludge | |

3. Fertilisers and Soil Conditioners

of (natural) mineral origin

Permitted

| Description | Additional requirements |
|---|---|
| Rock dusts | <ul style="list-style-type: none"> ■ Stone meal, clays and clay minerals ■ Composition must be known. |
| Pulverised clays (e.g. bentonite) | |
| Calcium chloride | CaCl ₂ ; Foliar treatment of apple trees, after identification of deficit of calcium |
| Lime fertiliser | <ul style="list-style-type: none"> ■ Slow release types to be used ■ Dolomite, Calcium Carbonate, seashells, ■ Calcified seaweed - only from dead marine deposits or fossil forms on land. |
| Natural phosphate rock, low in heavy metals | Only if the results of soil testing, tissue/leaf analysis or other deficiency symptoms demonstrate the need |
| Ground basic slag | Only if the results of soil testing, tissue/leaf analysis or other deficiency symptoms demonstrate the need |

| Description | Additional requirements |
|------------------------------|--|
| Potassium salts | <ul style="list-style-type: none"> ■ Only if the results of soil testing, tissue/leaf analysis or other deficiency symptoms demonstrate the need. In the production of bananas potassium can be applied in relation to the yield, without a demonstrated need, up to 4,0 kg K / t respectively 9,1 kg K₂SO₄ / t ■ Chloride content max 3%, ■ Only minerals from natural sources ■ Obtained from crude potassium salt by a physical extraction. |
| Potassium magnesium sulphate | |
| Potassium sulphate | |
| Magnesium sulphate | Only if the results of soil testing, tissue/leaf analysis or other deficiency symptoms demonstrate the need |
| Sulphur | Only if the results of soil testing, tissue/leaf analysis or other deficiency symptoms demonstrate the need |
| Trace elements | Only if the results of soil testing, tissue/leaf analysis or other deficiency symptoms demonstrate the need |

Not Permitted

In general, this standard is designed as a positive list, what is not allowed is prohibited. Nonetheless, a number of prohibited means are mentioned in order to provide the necessary clarity. In cases of doubt, please contact your certifying organisation.

| Description | Additional requirements |
|--------------------------------------|--|
| Synthetic nitrogen sources | |
| Chile saltpeter / Sodium nitrate | |
| Water soluble phosphatic fertilisers | |
| Pure potassium salts | with a chloride content of greater than 3% |
| Quicklime | Fast release, is permitted for disinfection purpose only |

4. Substrates, soils, pots and technical aid material

Permitted

| Description | Additional requirements |
|---------------------|---|
| Seed aids | For example: <ul style="list-style-type: none">■ Rock flour,■ Naturally occurring polymers |
| Substrate additives | <ul style="list-style-type: none">■ Vermiculite,■ Lava rock,■ Perlite |

Appendix 5: Allowable materials and methods for plant care and protection

The material listed here, especially under 3. and 4., may only be used in cases of proven need, and only if the biodynamic measures (e.g. rhythmical use of horn silica for insect control, peppering) cannot bring the problem under control. It should be kept in mind that use of some materials (e.g. Microfine sulphur, pyrethrum) could possibly endanger predator insect populations. New materials and methods for plant care and protection may be trialled only with the agreement of the Federation's Standards Committee based on a country exemption. If commercial preparations are bought in, care must be taken that they are free from constituents prohibited in this standard and are not produced by transgenic methods.

For Federation Licensees (certified by the International Certification Office)

All commercial inputs which are not clearly covered by Appendix 5 have to be approved by FiBL (Germany) according to this standard.

1. Biological agents and technologies

- Encouragement and use of natural control agents for plant pests (predator populations of mites, parasitic wasps etc.).
- Sterilised male insects
- Insect traps (Coloured boards, sticky traps and attractants).
- Pheromones (Sex-attractants; attractants in traps and dispensers)
- Mechanical repellents (Mechanical traps, slug and snail fences and such methods)
- Repellents (non-synthetic agents to deter and expel pests). Application only on plant parts not for consumption by humans and animals
- Painting (e.g. insect lime)

2. Surfactants and materials to promote plant health.

- Preparations that promote plant disease resistance, and inhibit pest and diseases e.g.:
- Plant preparations (Stinging nettle liquid manure, equisetum tea, wormwood tea etc.), propolis, milk and milk products, homeopathic preparations
- Waterglass* (sodium silicate, potassium silicate)
- Quartz sand, aluminium silicate
- Chitosan

- Additives: Surfactants, wetting aids, emulsifiers, oil
- Additional products approved and published by the BFDI Standards Committee

3. Agents for use against fungal attack

- Wettable sulphur and flowers of sulphur
- Waterglass* (sodium silicate, potassium silicate)
- Potassium bicarbonate*
- Essential oils from plants
- Plant extracts, if extraction method complies with this standard and the product does not contain any other aids like carriers or preservatives.
- Microorganisms / bacterial preparations
- Sodium bicarbonate*
- Sodium Chloride
- Cerevisane

4. Agents for pest control

- Microorganisms, Virus, fungal and bacterial preparations (e.g. Bacillus thuringiensis, Granulose virus)
- Spinosad with an exemption by the respective certifying organisation (APP 6: Appendix 7).
- Pyrethrum extracts and powder under the following circumstances:
 - no synthetic pyrethroids;
 - not for mushroom production;
 - as pest control in storage only if no chemical synergists are included in the formulation;
 - in agricultural production permitted if no chemical synergists are included in the formulation and with an exemption by the respective certifying organisation.(APP 7 A: Appendix 7);
- Quassia tea
- Oil emulsions (without synthetic chemical insecticides) based on vegetable (all crops).
- Oil emulsions (without synthetic chemical insecticides) based on mineral oil in the case of perennial crops only before flowering (Plants that flower all year are exempt) and only if effective plant oils are not available.
- Potassium soaps (Soft soap)*, fatty acids
- Gelatine* hydrolysed proteins

- Fe(III) Orthophosphate (Molluscicide)*
- Azadirachtin (Neem - insecticide)*
- Anti-coagulant rodenticide for use in stables or other housing. (only in bait-boxes or similar such that predators are not jeopardised)
- Rock flour*, coffee*
- Agents for use in stables and on animals: Diatomaceous earth, sticky fly-tapes, etheric oils
- Maltodextrin
- Terpene (Eugenol, Geraniol and Thymol)

5. Allowable aids on specialised crops, perennial crops and ornamental plants

- Diatomaceous earth, provided that compliance with the respective organic regulation is given
- Calcium hydroxide
- In cases of need, copper may be used such that the average amount used over 7 years shall not exceed 3 kg/ha/year, preferably with a maximum of 500g/ha/spray. In wine- and hop-growing regions with high fungal pressure the respective certifying organisation may grant an exemption for the use of an average amount of up to 4 kg/ha/year over 7 years. This is restricted to grapes and hops only (APP 23, see Appendix 7).
- Sulphur preparations such as Hepar Sulphuris(provided that compliance with the respective organic regulation is given), lime sulphur (fungicide, insecticide, acaricide) – provided that compliance with the respective organic regulation is given.
- Ethylene for flower induction in pineapples, provided that compliance with the respective organic regulation is given.

Appendix 7: Approval of exemptions

The following exemptions are foreseen in the International Demeter Biodynamic Standard and can be approved by the respective certifying organisation. All approved exemptions are to be listed and reported annually to the AC.

Tab.: 22 / Overview exemptions for approval

| APP Nr. | Description | Reference chapter | Further criteria / restrictions |
|---------|--|---------------------|--|
| 1 | Bringing in seeds of untreated, conventional origin or propagation material of conventional origin | 6.1.2.2. / 6.1.2.3. | |
| 1A | Bringing in manure from animals fed GMO fodder | Appendix 4 | <ul style="list-style-type: none"> ■ The manure must be composted for at least a year, or by using an intensive, fast composting method. ■ The compost must be identified and processed as a separate pile. ■ The origin, amount, and use (which area, which crop) of all brought in fertilisers must be adequately documented. |
| 1B | Bio-Solarisation | 6.1.5.5. | <ul style="list-style-type: none"> ■ Immediate application of 500 and CPP after use of the method ■ Only in combination with a crop rotation concept ■ may be applied for again at the earliest at intervals of three years. |
| 1C | Sterilisation of growing substrate for mushrooms, growing substrate and potting mixes | 6.1.7.6. | <ul style="list-style-type: none"> ■ Immediate application of 500 and CPP after use of the sterilisation |

| APP Nr. | Description | Reference chapter | Further criteria / restrictions |
|---------|--|-------------------|---|
| 1D | Mushroom species which are known to react to light, e.g. Shii-take, cultivated with light, if climate requires insulated growing sheds | 6.1.8.4. | |
| 1 E | Targeted enrichment with CO ₂ to optimise the CO ₂ offer during deficit growing periods | 6.1.6.5. | |
| 2 | Soil kept free of vegetation perennial crops | 6.1.7. | First year of planting or permanent in semi-arid climates |
| 3 A | Commercial potting mixes not fulfilling the general requirements | 6.1.6.1. | |
| 4A | No preparations used on steep and inaccessible land | 6.2. 6.3.6.6. | |
| 4 B | Lower horn silica spraying frequency to unmowed pastureland | 6.2. | <ul style="list-style-type: none"> ■ Each unmowed pastureland should at least be sprayed with horn silica every three years ■ Two-third of fodder areas should be sprayed with horn silica every year |
| 5 | Use of fossil water or non-renewable water sources for irrigation | 6.1.9.2. | <ul style="list-style-type: none"> ■ Must include a detailed plan assessing the impact of the usage ■ Detailed water management plan must be present |
| 5 A | Cooperation between farms | 6.3.4. | Restrictions see 6.3.4. |
| 5 B | Approval of water treatment for irrigation water | 6.1.9.2.2. | <ul style="list-style-type: none"> ■ Only if the need for treatment is proven ■ Only if there are justified reasons that already approved methods have a lesser effect |
| 6 | Use of Spinosad in pest control | Appendix 5 | |
| 7 A | Use of Pyrethrum in agricultural production | Appendix 5 | No chemical synergists are included in the formulation |
| 8 | Exemptions from the requirements governing housing and outside access | 6.3.5. | Further requirements see 6.3.5. |

| APP Nr. | Description | Reference chapter | Further criteria / restrictions |
|---------|--|---------------------------------|---|
| 9 | Lack of either access to pasture or open air runs for cattle | 6.3.5. / 6.3.5.1. | |
| 10 | Dehorning and dehorned stock | 6.3.5.1. | Annual review |
| 11 | Poultry housing existing prior to June 2013 | 6.3.5.4. | Stock limits only |
| 12 | Limit on imported organic feeds | 6.3.6.2. / 6.3.6.9. / 6.3.6.10. | |
| 13 | Less than 3 kg hay / animal in winter feeding | 6.3.6.3. / 6.3.6.4. | Silage or straw as a substitute |
| 14 | Guest animals | 6.3.6.7. | |
| 15 | Community Pasture | 6.3.6.8. | |
| 16 | Conventional feed for young turkeys | 6.3.6. / 6.3.6.10 | Max. 10 % up to the 10th week |
| 17 | Brought in stock | 6.3.8.1. / 6.3.8.3. | Up to 40 % of the herd, further restrictions see 6.3.8.1. |
| 18 | Bringing in piglets of conventional origin | 6.3.8.5. | Can be sold as "in conversion to Demeter" max. |
| 19 | Bringing in meat cockerels of conventional origin | 6.3.8.6. | |
| 20 | Prolonged conversion periods | 6.4.4.1. | <ul style="list-style-type: none"> ■ Up to five years for perennials and ornamental plants (further restrictions see 6.4.2.); ■ Conventional animal husbandry up to three years (if subsequently abandoned), ■ Organic animal husbandry up to five years |
| 21 | Bee management – queen excluders after the conversion period | 6.5.2.2. | <ul style="list-style-type: none"> ■ Only in well justified cases ■ The certifying organisation has to define the conditions under which an exemption is possible |

| APP Nr. | Description | Reference chapter | Further criteria / restrictions |
|---------|---|---------------------|--|
| 22 | Deviations from the feeding regime in emergency situations | 6.3.6. / Appendix 2 | <ul style="list-style-type: none"> ■ Only in unforeseeable occurrences such as extreme climatic conditions, natural catastrophes, damage due to fire, etc. ■ Deviations from the general feeding regime exempt by the certification organisation shall comply with the principle of availability and the general regime by reducing the on-farm proportion, then the Demeter proportion in general, then the organic proportion up to 100 % non-organic shares ■ Non-organic proportions are restricted to the fodder components mentioned in Appendix 2 d) |
| 23 | To use an average amount of up to 4 kg/ha/year of copper over 7 years for grapes and hops | Appendix 5 | |

An application for an exemption that is not foreseen must be addressed to the Standards Committee and comply with chapter 1.4. Country exemption procedure of the Quality Management Manual of BFDI.

Appendix 8: Minimum age at slaughter for poultry

Tab.: 23 / Minimum age at slaughter for poultry

| species | Minimum age (days) |
|----------------------------|--------------------|
| chickens | 81 |
| Peking ducks | 49 |
| female Muscovy ducks | 70 |
| male Muscovy ducks | 84 |
| Mallard ducks | 92 |
| guineafowl | 94 |
| Turkeys and roasting geese | 140 |

Appendix 10: Biodynamic preparations

Quality assurance for the production of the biodynamic preparations.

This appendix gives guidelines for preparation production and use. It is a recommendation only. The biodynamic measures which are required for Demeter certification are listed in chapter 6.2. Biodynamic Preparations.

General aspects

- The biodynamic compost and spray preparations (=“preparations”) created out of natural and organic substances are used in minute doses to enhance soil life, plant growth and quality and animal health. They act as a kind of “bio regulator”, forcing the self-regulation of biological systems, e.g. the farm’s whole biological cycle .
- They are essential to biodynamic agriculture and their use is a recognised requirement of the International Demeter Biodynamic Standard.
- The production of preparations takes place on the farm. The method of production involves taking certain plant materials (e.g. camomile flowers, grated oak bark and dandelion flowers), cow manure or quartz meal, placing them in selected animal organ parts and fermenting them in the soil for certain period of time, usually half a year. After the preparation has been dug out remaining residues of animal organs are disposed of according to the current regulatory requirements.
- Application rates for the field sprays are 50-300g/ha (Horn manure) and 2.5-5g/ha (Horn silica) and 1-2 cm³ each of the compost preparations per 10 m³ of compost or deep litter manure/slurry.
- Cow-horn manure or prepared cow horn manure (500P) is to be spread at the start of the vegetative phase, or after harvest of the certified crop, but in any case at least once a year at a rate of at least 50 gr/ha. Horn silica is to be sprayed as the plant stage of development dictates, however at least once a year at a rate of at least 2.5 g/ha.
- For crops that are harvested all year round and continuously (like for example bananas), it is recommend to apply the spray preparations at least three times per year.
- For full details on the application and use of the biodynamic preparations see chapter 6.2..

Basic principles for making the preparations

- The biodynamic preparations will be produced under the use of natural processes (e. g. winter soil rest and summer soil life) at the best in the farm on which they are to be applied. All the materials used for making the preparations should originate from this farm as far as possible.

- Living biological processes are essential during production. The organs used are chosen for the unique properties they possess as a result of their former function within the animal organism. Their function is to concentrate the constructive and formative living forces into the substances of the preparations.
- The animal organs used need to be of food quality standard. Disinfectants are deleterious to the process.
- Produced in this special way, the preparations develop a strong yet subtle power whose effect may be compared to that of homeopathic remedies.

The materials required for the production of preparations

The following materials are used in the production of the biodynamic preparations and the estimated quantities of organ material required per acre.

Tab.: 24 / Materials for the production of the biodynamic preparations

| Preparation | Material | Animal Organ | Quantity/year |
|---|----------------|---------------------|---------------------|
| Field Sprays | | | |
| Horn manure | Cow manure | Cow horn | 1 Horn / ha (*1) |
| Horn silica | Quartz meal | Cow horn | 1 Horn / 25 ha |
| Compost Preparations: | | | |
| Camomile | Flowers | Intestine (2*) | 30 cm / 100 ha |
| Oak Bark | Bark | Skull (3*) | 1 skull / 300 ha |
| Dandelion | Flowers | Peritoneum (4*) | 30 x 30 cm / 100 ha |
| Not affected by Regulation (EC) 1774/2002: | | | |
| Yarrow | Flowers | Stag's bladder (5*) | 1 bladder / 250 ha |
| Stinging nettle | whole plant | none | |
| Valerian | Flower extract | none | |

Annotation: (1*): if 5-time used; (2*): Bovine intestine, from BSE free countries (3*): Skull (only bone) from cows (< 1 year old), pigs or horses; (4*): Bovine peritoneum; (5*): Stag's Bladder (not originated from North America)

The origin and treatment of the animal organ material

- The required animal organ material should be taken from fully certified organic animals originating from the farm wherever possible. The origin of other horns used in the production of Horn Manure is possible too.
- Currently bovine intestines can only be used from BSE free countries.
- All animal organs (except of stag's bladder and horns) are material of category 3 qualified for food according to Regulation (EC) 1774/2002.
- The organs are used either fresh or dried.
- The skull is before filling with oak bark placed in a closed container filled with saw dust and left for a period of time during which it is cleaned of any fleshy remains by means of a process of microbial maceration. After the skull is removed waste material is disposed of in accordance with current regulatory requirements.
- During the production process, the filled organ material is carefully protected from disturbance by wild animals (through the use of unglazed pots, careful fencing etc.)
- After the production of preparations is completed all remaining animal residues are disposed of in the required way.

Risk assessment

The application of the biodynamic preparations presents no additional risk, because

- the organ material used is of food standard quality (skull, bovine intestine, peritoneum) or permitted fertiliser (horn),
- Remaining material is removed and disposed of when production is complete,
- Biological stabilisation and the neutralisation of pathogens takes place during the half-year fermentation period,
- The amounts of prepared substance applied is extremely low (very few grams per acre),
- The compost preparations are applied to the manure and compost and not directly on the plants.

Considering the extremely small quantities used and the natural micro-biological breakdown processes involved, the production and application of these preparations is virtually risk free.

Recommended literature:

Raupp, J. & U. J. König (1996): Biodynamic preparations cause opposite yield effects depending upon yield levels. *Biol. Agric. & Hort.* 13, 175-188

Wistinghausen, C.v.; Scheibe, W.; Wistinghausen, E.v.; König, U.J. (2000): *The Biodynamic Spray and Compost Preparations Production Methods. Booklet, Vol. 1*, Stroud; 1st Ed.

Wistinghausen, C.v.; Scheibe, W.; Heilmann, H.; Wistinghausen, E.v.; König, U.J. (2003): The Biodynamic Spray and Compost Preparations Directions for Use. Booklet, Vol. 2, Stroud; 1st Ed.

The use of the Biodynamic preparations is permitted under Regulation (EU) 2018/848, Annex II, Section 1.9.9

7. Product Standards for Demeter product categories

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

7.1. Packaging

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Sept 2023

7.1.1. Scope

The present standard applies to packaging of products that are introduced into the supply chain with the aim of retail trade in particular consumer packaging. Production-related packaging, secondary packaging (grouping, display) and tertiary packaging (transport) are not within the scope of this standard. However, they should also be taken into account as far as possible.

Please note this is the general packaging section, product standards may contain further restrictions depending on the product category.

7.1.2. General principles

The Packaging Section is currently being developed. if you already use packaging that is not listed here, or if you would like to use unlisted packaging, please contact your respective certifying organisation or the Standards Committee of the Biodynamic Federation Demeter International.

Packaging and Demeter products should meet the best possible environmental practice that means in any case:

- Minimise the amount of material used, Packaging which is to suggest the impression of a larger volume than that of the actual content is to be omitted.
- Wherever possible reusable or at least recyclable systems are preferable.
- Overpacking in the sense of, for example, small packaging units within an overall package or additional decorative sleeves is to be omitted.

7.1.3. Explicitly prohibited packaging materials

- **Nanomaterials** in packaging or coatings of packaging must not be used. At present, the legal provisions regarding the labelling of nanomaterials are not sufficient. If you have any concerns, please insure yourself back with your manufacturer or request a declaration of no objection regarding the use of nanoscale substances. Nanoscale particles can be found in packaging, for example, in products with special antibacterial coatings, special properties with regard to the migration of gases and surfaces with special adhesion properties.
- Packaging materials must not contain **mould protection agents**.
- Coatings, dyes or inks that contain **phthalates** if they will be in direct contact with foodstuffs are not permitted.
- Polyvinyl chloride (PVC) and chlorinated packaging in general is not permitted. As there is currently still limited availability for all technical applications (especially for acidic products and generally for bottles), the certifying organisation may grant an exemption for inner coatings of closure lids and caps (EXP XIX : Chapter 7.19.).
- Packaging material must not be made from materials or substances that contain, have been derived from, or manufactured using, **genetically modified organisms** or genetically engineered enzymes. This applies in particular to bio-based plastics produced from genetically modified renewable raw materials.
- Synthetic coatings for cheese if they contain **fungicides** are not permitted.

7.1.4. Approved or restricted approved packaging materials

Tab.: 25 / Product groups with their abbreviations

| Abr. | Product group / standard section | Abr. | Product group / standard section |
|------|--|------|--|
| BB | Bread and bakery (cakes and pastries) | FV | Fruits and vegetables |
| MI | Milk and dairy products | Oil | Cooking oils and fats |
| S | Sugar, Sweetening agents, confectionary, ice-cream and chocolate | IMF | Infant milk formula |
| MS | Meat and meat products | HS | Herbs and spices |
| COS | Cosmetic and personal care products | G | Grain, soy products, cereal products and pasta |
| W | Wine and sparkling wine | B | Beer |
| A | Alcoholic spirits and alcohol for further processing | CFW | Cider, fruit wines and vinegar |
| SCN | Soy products, cereal and nut drinks | CCC | Chocolate, cocoa, confectionaries |
| C | Coffee | | |

Tab.: 26 / Overview packaging material and product groups

| Packaging | Product group | Comments / restriction |
|-----------------------------|---------------|--|
| Paper | | |
| Paper | All | Bleached paper or cardboard must be totally chlorine free (TCF) or elemental chlorine free (ECF). Recycled paper must be process chlorine free (PCF); from recycled paper and cardboard packaging, mineral oil compounds can migrate from the printing inks of the raw material into the product. Especially with products containing fat and oil and products with a long shelf life, you should consult your manufacturer regarding avoidance and possible barriers. This commentary applies to all paper packaging. |
| Waxed paper | All | |
| PE-coated paper | All | |
| Cardboard/Carton/Pressboard | All | |
| Carton packaging/PE | All | Coated with polyethylene on one or both sides |
| Pergamin / parchment paper | All | |

| Packaging | Product group | Comments / restriction | |
|---|---------------------|---|--|
| Aluminium | | | |
| Aluminium Foil | All (exc.wine/ CCC) | If technically unavoidable (what is classified as technically unavoidable is the responsibility of the respective certifying organisation) | |
| Aluminium composite (with cardboard, PE) | FV, MI, SCN, C | For fresh milk and beverages, fluid products; | |
| Metallized films | C | | |
| Aluminium tubes | FV, Oil | Only for mustard, horse radish, mayonnaise | |
| Mineral oil-based plastics | | | |
| Polyethylene (PE) | All (exc.wine) | each individually and in combination | Please notice possible restrictions in product standards |
| Polypropylene (PP) | All (exc.wine) | | |
| Polyamide (PA) | FV, G, MS, MI | | |
| Polyacrylic | G | Please notice possible restrictions in product standards | |
| Polystyrol/Polystyrene (PS) | MI | Only K3-Beakers in combination with cardboard sleeves | |
| Polyethylene Terephthalate (PET) | FW; MI | Only for beverages, only within the framework of returnable systems | |
| | MS; MI, G | Only for thermoforming sheets | |
| Cellulose hydrate / cellophane | S, G | Individually, in combination or as coating | |
| Bio-based plastics / technical biopolymers | | | |
| Polyethylene (PE) | All | In the overall view, bio-based plastics generally offer no environmentally relevant advantages. In any case the material must not contain genetically modified renewable raw materials or be made from them | |
| Cellulose acetate (CA) | All (exc.wine) | | |
| Compostable or biodegradable primary packaging | | | |
| Starch plastics (starch blends, polymer raw material, polyvinyl alcohol/PVAL, thermoplastic starch) | All (exc.wine) | If conforms with the European standard for compostable packaging (EN13432). In any case the material must not contain genetically modified renewable raw materials or are be made from them. | |
| Polylactic acid (PLA) | | | |

| Packaging | Product group | Comments / restriction |
|-------------------------------|----------------|-------------------------|
| Cellulose products | | |
| Polyhydroxy fatty acids (PHF) | | |
| Other materials | | |
| Earthenware | All | |
| Sheet metal and tinplate | All (exc.wine) | welded and not soldered |
| Glass | All | |

7.2. Fruit and vegetables

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision June 2022

7.2.1. Scope

The present section covers the processing of fruits and vegetables including mushrooms, potatoes and potato products. The Standard functions as a positive list, all methods, aids and additives not mentioned are prohibited. In cases of doubt contact your respective certifying organisation or the coordinator of the Standards Committee.

7.2.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for fruit and vegetables are listed in the following section of the standard.

7.2.3. Fruit

General principles – fruit

- Processing heat treatments such as **pasteurisation**, **sterilisation** und **autoclaving** are justified with respect to microbial stability and shelf life of the products. The gentlest option to achieve this affect must be chosen. In cases of doubt the respective certifying organisation shall decide on the need for the technology used.
- **Aseptic filling** is possible and desirable. Steaming should be achieved using multistage downdraught and/or thin film evaporator, if possible under vacuum, e.g. in a vacuum steamer.
- Preliminary washing can be with tap water. Final cleaning of the fruit must be done with pure drinking water.

- **Sweetening of fruit preserves** is permitted, the bottling liquid may be prepared using food grade honey, whole cane sugar or raw sugar. For nutritional reasons these additives should be used in the lowest concentrations possible.
- The production of **fruit juice concentrates** from fruit juices or unrefined juice extracts without additional sweetening is allowed, **juice reconstituted from concentrates** is not permitted. The production of Nectars from stone fruit and pip fruit (as well as wild fruits and berries) is permitted.
- The production of fruit syrups is permitted.
- Sweetening of paste and plum is not permitted, pulp from sour fruits may be sweetened with honey or sugar.

Product specific aids, additives and processing methods - fruits

- **Ethylene** can be used for the ripening of bananas.
- For spreads based on fruit the use of **Pectin** (E 440a, non- amidated), **Agar-agar** (E 406; without phosphates or calcium sulphate, not preserved with sulphur dioxide) and **Carob bean gum** (E 410) is admitted.
- Native **starch** and pre-gelatinised starch as an ingredient is permitted.
- **Enzymes** can be used but must conform to the requirements listed in table 3.3.
- **Plant oils and fats** (non-hydrogenated) as non-stick agents for dried fruit.
- **Plant proteins** (e.g. pea protein) for cosmetic reasons, clarification and fining is permitted (needs written permission from the respective certifying organisation) (EXP X : Chapter 7.21.).
- The addition of **saccharose** in dried form, or as syrup is not permitted.
- **Diatomaceous earth**, **Bentonite** and **Gelatine** for fining, clarifying and filtering of fruit juices is permitted.
- All treatments of fruit with **natural acids** like lemon juice concentrate or lactic acid are permitted.
- Mechanical chopping or homogenisation is permitted.

7.2.4. Vegetables (incl. Potatoes and mushrooms)

General principles – vegetables

- Processing treatments such as pasteurisation, sterilisation und autoclaving are justified with respect to microbial stability and shelf life of the products. The gentlest option to achieve this affect must be chosen. In cases of doubt the respective certifying organisation shall decide on the need for the technology used.

- Aseptic filling is possible and desirable. Steaming should be achieved using multistage downdraught and/or thin film evaporator, if possible under vacuum, e.g. in a vacuum steamer.
- Preliminary washing can be done with tap water. Final cleaning must be done with pure drinking water.
- Mechanical peeling methods are allowed for those vegetables whose skin is not suitable for eating.
- All treatments of vegetables with natural acids like lemon juice concentrate, vinegar or lactic acid are permitted.

Product specific aids, additives and processing methods – vegetables

- Diatomaceous earth is permitted.
- Freezing vegetables with added liquids is not permitted.
- Tomato paste is produced from pulp by water reduction using heating. To adjust the content of dry matter, fresh pulp may be added back in.
- For the production of vegetables preserved with lactic acid starter cultures are allowed.
- The addition of sugar up to 1% is allowed.

7.2.5. Packaging – fruits and vegetables

The general rules under chapter 8.1. Packaging apply, additional restrictions are as follows:

- Packaging of fresh fruit and vegetables in mineral oil based or bio-based plastic is not permitted, this also applies to packaging consisting at least partly of the named substances.
- Biodegradable plastic, recycled plastic and fully recyclable plastic can be used for sensitive fruits and vegetables (fresh herbs, salads, berries, carrots and cherry tomatoes) for a transitional period until 01/01/2026

7.3. Bread, cakes and pastries

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Sept 2023

7.3.1. Scope

The present section covers the processing of bread, cakes and pastries. Related products like cereal products of confectionary are regulated by other standard sections.

The Standard functions as a positive list, all methods, aids and additives not mentioned are prohibited. In cases of doubt contact your respective certifying organisation or the coordinator of the Standards Committee.

7.3.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for bread, cakes and pastries are listed in the following section of the standard.

7.3.3. General principles – Bread, cakes and pastries

All ingredients and additives in the baking improvers are to be included in the complete declaration as required for the labelling of wrapped or loose Demeter bakery products.

The use of hammer mills is prohibited because of the danger of high rotation speed causing temperature affects, which reduce quality. If the mill is based on hammer technology but equipped with an effective internal cooling system, use is permitted. Mills made with natural or artificial stones, or steel rollers may be used. When buying a mill, stone mills should be preferred.

The baker can decide whether to bake freshly milled flour, or flour that has been stored for some time.

For technical reasons, the prolonging or interrupting of the rising process in the production by cooling or freezing is allowed. It should be declared.

Baking tins and trays made of steel, stainless steel, or glass may be used. If coated tins or trays are used, before using the first time the recommendations for the pre-treatment of the coated surface must be followed carefully. Even small imperfections in the surface mean that such coated steels may no longer be used.

Demeter Bread and bakery products, whether wrapped or loose, must be accompanied by a list which is available to all customers, retailers and distributors.

7.3.4. Ingredients, aids and additives – Bread, cakes and pastries

- **Peanut and palm oils** at least in organic quality are permitted only for deep-frying
- As a blanket rule **dried milk** products may not be used
- Permitted chemical **raising agents** are **Sodium or Potassium bicarbonate**, with **Tartaric acid, sodium or potassium tartrate** (E 334/335/336 and E 500/501) in any combination. Grain starch is the only permitted carrier.
- **Lecithin** as an additive for chocolate coating is permitted.
- Approved setting agents are **Agar-agar** (E406) and **non-amidated Pectin** (E 440a). Gelatine may be used only for yoghurt and cottage cheese and for cream preparations.
- A four per cent solution of **sodium hydroxide**, E 524, is allowed in the production of Brezel and salt-bakery products.
- **Flavourings** for use in fancy baking are to be solely pure essential oils or pure extracts derived from the name giving material.
- **Wheat gluten** may be used as baking improver, but only for bakery products containing wheat and only for small bakery items like baguette, rusks and toast.
- As **raising agents from micro-organisms** may be used, baking ferments, sour dough and yeast. Culturing acid may be used as a starter only in the first stage for sour dough, the aim is to develop a multi-stage process without the use of yeast. For yeast the regime of availability is organic yeast, yeast multiplied on organic substrates, conventional yeast.
- Fruit juices, malt and soya flour as well as acerola powder are permitted as baking improvers in the production of all bakery items.

- Suitable **non-stick agents** are flour (from grains), plant oils and fats, butter and other animal fats. Wood flour, magnesium oxide and non-stick emulsions are not permitted. Wax is allowed until a more suitable replacement material is found.

7.3.5. Product specific processing methods – Bread, cakes and pastries

- Baking in foil is prohibited. Baking paper and baking foil may only be used to prevent sticking of small bakery items (e.g. salt pretzel, buns, biscuits etc.).
- Baked through bread and bakery products may not be frozen and sold as **defrosted products** afterwards.
- Baking in **high frequency infra-red ovens** is not permitted.
- **Single use baking forms** made of aluminium are prohibited.

7.4. Grain, cereal products and pasta

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Sept 2023

7.4.1. Scope

This Standard covers grains, milled grain, grain flakes, including pseudocereals like buckwheat, quinoa and amaranth. Also products made from the above e.g. breakfast cereals (muesli), baking mixtures, dry mixtures with substantial grain percentage (Rissoles, patties, risotto), coffee substitutes from grain, “native” starch and pre-gelatinised starch, malted grain. This section does not refer to bread, cakes and pastry, please see also 7.3.

7.4.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for bread, cakes and pastries are listed in the following section of the standard.

7.4.3. General principles – grain, cereal products and pasta

For filled products like filled pasta the filling has to meet the respective standard e.g. for fruits and vegetables or meat and meat products.

7.4.4. Ingredients, aids and additives – grain, cereal products and pasta

- For **ready to use baking mixtures**, the following micro-organism cultures (not genetically modified), if available grown on certified organic substrates are allowed: sour dough, dried sour dough granules, yeast, yeast products.

- Permitted **chemical raising agents** for ready to use mixes are Sodium or Potassium bicarbonate, with Tartaric acid, sodium or potassium tartrate (E 334/335/336 and E 500/501) in any combination. Grain starch is the only permitted carrier.
- **Flavours** are to be extracts from at least certified organic production e.g. essential oils.
- **Lecithin of organic quality** is permitted for the production of cereal flakes (mixture of cereals, sugar and salt; not rolled grains).
- Permitted **processing aids** are Nitrogen (N₂), Carbon dioxide (CO₂) and all other aids without special restriction to product groups according to table 3.3 under Fundamental requirements.
- **Sodium hydroxide** (NaOH) is permitted to adjust the pH-value in the production of starch.

7.4.5. Product specific processing methods – grain, cereal products and pasta

- The processing of **parboiled rice** from Demeter rice is permitted, but the processing method has to be declared on the front label.
- The production of **modified starch** using chemicals or enzymes is not permitted.
- **Extrusion techniques** are defined as “shaping extrusion” - any kind of gentle, cold pressing of substances through a die to shape the substance and “modifying extrusion” - by means of high pressure and or high temperature, whereby not only the physical shape of the product is influenced, but also the specifications and qualities of the original material. Shaping extrusion is permitted, modifying extrusion is not permitted. As these technologies can often not be clearly separated in accordance to the processed material, an upper limit of 75 °C and 90 bar for shaping extrusion is defined.

7.5. Herbs and spices

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision June 2018

7.5.1. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for herbs and spices are listed in the following section of the standard.

7.5.2. General principles – Herbs and spices

At harvest, impeccable cleanliness is of paramount importance. This means the harvested products should be free from obvious disease, dead tissue, damage, decay, etc. In order to prevent microbial contamination, it is important to ensure that the herbs and spices do not come into contact with the soil during harvest. If cleaning is required, water of drinking quality, without any additives, is to be used. This cleaning water must be removed from the herbs and spices as completely as possible before further processing.

Drying should be as gentle as possible, maintaining the maximum quality and be carried out using the optimum conditions for each particular product. The drying temperatures are to be determined by the product. The process is to be controlled such that impeccable hygiene is maintained. Reliance on solar energy and the use of energy saving processes is expressly advocated.

Chopping of herbs and spices is always accompanied by a loss of etheric oils. Whenever possible, therefore, the herbs and spices should be marketed either whole or coarsely chopped. The usual milling and slicing machinery and methods may be used for size reduction. If dust is produced in the process, then this must be extracted, with the air stream being cleaned before release into the environment.

7.5.3. Ingredients, aids and additives – Herbs and spices

- Calcium carbonate (E 170) is permitted as an anti-caking agent.
- Carbon dioxide and Nitrogen for sterilisation and cold grinding are permitted.

7.5.4. Product specific processing methods – Herbs and spices

- **Direct drying by sunlight** in the field or on the ground as a way of reducing the harvest time by wilting the swathe is permitted only for fruit and medicinal seeds (e.g. caraway, fennel, etc.)
- **Artificial drying processes** on conveyor belts or shelves, using vacuum, freeze drying, or condensation methods are permitted.
- **Deep freezing** and **drying with electrolytes** (chemical water extraction) is allowed, but the only permitted electrolyte is salt.
- **Pickling** in plant oils or vinegar of Demeter quality or of certified organic quality is permitted.
- Allowable **disinfection methods** are the use of dry or moist heat. Disinfection using superheated steam, in cases where this is technically possible, is preferable to other heat treatment methods. Generally, treatments using a high temperature for a short time are the most effective (e.g. 105-115° C for 2-5 minutes).

7.6. Meat and meat products

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Oct 2022

7.6.1. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for meat and meat products are listed in the following section of the standard.

7.6.2. General principles – meat and meat products

The slaughtering of animals requires particular attention. Please see 6.10.

7.6.3. Ingredients, aids and additives – meat and meat products

- **Preparations and extracts of spices** are not permitted.
- **Extracts of meat and yeast** and **flavour enhancers** are not permitted.
- The processor must obtain written statements to confirm that **irradiation** or **methyl bromide** have not been used in the disinfection of the herbs and spices.
- **Artificial casings** are permitted if they are declared on the labelling. Natural casings and intestines may be treated **with lactic acid** or vinegar and cooking salt.
- **Citrates** are permitted in the production of scalded sausage if it is not possible to process the meat warm. **Citrates** in general, dried **blood plasma**, blood plasma, or **blood serum** may not be used.
- **Aspic powder** in organic quality is permitted.
- **Starter cultures** are permitted for use in sausages to be eaten raw. The use of **mould cultures** is permitted, though not from genetically modified micro-organisms.

- The production of salt cured meat may not include the use of **nitrite salts**, **saltpetre** (E 252), **ascorbic acid** (E 300), **Glucono-delta-lactone** / GdL (E 575) and **food-grade acid**.
- The use of **milk protein**, **dried milk products** and other cutting aids is prohibited.

7.6.4. Product specific processing methods – meat and meat products

- **Immersion substances** meeting the general requirements of this standard are permitted. Dry curing and brine bath curing are both permitted, with the brine bath containing all types of salt mentioned in 3.3. with or without spices.
- The use of **tenderising materials**, or of electrical treatments to tenderise the meat, is not permitted.
- Cooling down in steps and rapid cooling using cold air are both allowed. The carcasses may not be sprayed with **brine solutions**, or with **food-grade acid**.
- To prevent clotting, if the blood cannot be processed directly, it can be stirred with metal rods.
- The production of **pressed meat** using off-cuts of meat is not allowed.
- **Smoking** is permitted. The wood is burnt either directly in the smoking chamber or outside of it in a suitable facility. Cold and warm smoking processes (< 70°C) are permitted. The individual sausage types determine the exact method required. Permitted smoking agents are suitable native wood types (as wood, shavings or sawdust, preferably from beech, oak and plane trees, pinecones, herbs and other types of plants such as juniper, heather, branches, conifer cones and spices).
- **Full preservation** is allowed. Full preservation is permitted in cans with lacquered internal and external surfaces. White metal cans may be used, but the use of glass is preferred. The cans may be welded, but no solder may be used. Containers made of plastic, aluminium, or plastic- aluminium laminates are not permitted.

7.7. Milk and dairy products

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Oct 2022

7.7.1. Scope

This section of the Standard deals with the processing of fresh milk and dairy products such as yoghurt, curd, cheese and butter. Details for ice cream (also sorbets and frozen yoghurt) production please see section 7.10.4 and 7.10.5.

7.7.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for fresh milk and milk products are listed in the following section of the standard.

7.7.3. General principles – milk and dairy products

The milk must be picked up by special milk trucks, which are used only for Demeter milk, or have special tanks labelled for Demeter milk. Transport is also possible in Demeter labelled cans or may be delivered directly from the farm to the dairy.

In order to maintain the inner quality of the milk right through to consumption, it should be processed whole as far as possible and also fresh from the cow.

7.7.4. Ingredients, aids and additives – milk and milk products

- **Starter cultures** (also direct starters) may be used. The raising and multiplication must take place in Demeter milk. The use of cultures that have not been grown on milk (e.g. moulds) may be used for specific recipes.
- **Rennet** of calves, microbial rennet, rennet-pepsin mixtures (calf rennet), acid starters and plant extracts (Artichokes, Ladies' bedstraw – Gallium verum) may be used to curdle milk. The rennet should contain no preservatives. It may not however be curdled with pure acid.
- **Calcium carbonate** (CaCO_3) and **Calcium chloride** (CaCl_2) are permitted. Sodium bicarbonate may not be used.
- **Calcium chloride** (E 509) may be used as processing-aid in all cheese production.
- Colouring butter or other milk products with **beta-carotene or lactoflavine** is not permitted.
- As thickening agents **starch** and **agar-agar** may be used.
- Surface treatment with **potassium sorbate, calcium sorbate**, or **natamycin** is not permitted.
- The salt brine can be re-boiled and enriched with salt accordingly. Sterilisation with **sodium hypochlorite, hydrogen peroxide** etc. is not permitted.

7.7.5. Product specific processing methods – milk and milk products

- The following **coatings** can be used (single or mixed with each other) for hard cheeses, sliceable cheeses and for semi-hard cheeses: **Beeswax, natural hard paraffin wax and microcrystalline waxes**. Natural hard paraffin wax and microcrystalline wax may contain no other additives such as polyethylene, short chain polyolefine, polyisobutylene, butyl or cyclic rubber. In addition, the waxes may not be coloured.
- **Plastic film** is provisionally permitted for covering the outer layer of sliceable cheese, and semi-hard cheese, as long as it is free **from potassium sorbate, calcium sorbate and natamycin**. (This is permitted only until a suitable replacement material or method is found).
- The use of **aluminium vats** is not allowed for either storage or processing.
- **Pasteurisation methods**, to a maximum temperature of 80 degrees C, may be used to pasteurise milk. After treatment the milk must have a positive peroxidase index. As a heating method for the raw milk of sour milk products, yoghurt, kefir and buttermilk, high temperature heating to 85-95°C for 5-10 minutes is permitted. Other heat processes such as

sterilisation UHT (Ultra high temperature) or **ESL (extended shelf life) treatments** are not permitted, and the milk may not be **homogenised**.

- To be allowed to label milk with the Demeter brand the milk has to have a maximum **homogenisation degree** of 30% (measured with an homogenisation pipette, according to the NIZO method). In order to refer to milk as “**non-homogenised**”, full fat milk has to have a maximum homogenisation degree of 10%.
- **Indirectly acidified** butter, made according to the NIZO method is not permitted. The other common methods of butter manufacture are allowed.
- **Fresh and curd cheese** may be produced with the addition of starter cultures, calcium chloride and rennet. The utilisation of whey proteins using methods such as **thermo-curd methods** and **ultrafine filtration** are permitted. The use of **centrifugal whey separation** methods is not allowed.
- **Sour milk cheese** may only be manufactured from sour milk curd cheese.
- For the production of sour milk products, yoghurt, kefir and buttermilk homogenisation by means of a homogeniser is prohibited. Partial homogenisation by means of a centrifuge is allowed in the production of yoghurt. The following options are available for **increasing the dry matter**.
 - Addition of powdered milk
 - Evaporating under vacuum
 - Evaporating in a downdraft, multi-stage evaporator.
 - Ultrafiltration
 - Reverse osmosis
- The production of **dried milk products** from Demeter milk and milk products is permitted (e.g. Whole milk powder, skim milk powder, buttermilk powder, whey powder.). Milk powder from **horses** and **goats** may be marketed as Demeter products. Milk powder from **cow's milk**, is permitted **only as an ingredient** in processed products.
- Bacteria may also be removed by **bactofuging**, but the material that has been separated out may no longer be used.

7.8. Infant milk formula

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Sept 2020

7.8.1. Scope

The scope of the standard for Demeter infant milk formula encompasses initial formula and follow-on formula that is produced based on cows' or goats' milk. Only products aimed at infants up to the age of 12 months are allowed to be marketed under the Demeter trademark/logo, or as biodynamic, or implied to be such.

Products based on soybeans or soybean milk are excluded.

7.8.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for infant milk formula are listed in the following section of the standard.

7.8.3. General principles – Infant milk formula

Breastfeeding means more than just giving the best and healthiest food to the infant. It is also food for the soul and maintains in a unique way the intimate relationship between mother and child that began during pregnancy.

Demeter dairy food for infants is not intended as a substitute for breast milk. It should rather support and supplement in cases where full or partial breastfeeding is not possible for a variety of reasons.

Particularly during this crucial stage, it is essential for Mother and child to receive a diet based on certified biodynamic raw materials.

The processing and the composition of infant milk formula is subjected to strict legal regulations such as requirements determining hygiene, ingredients and content of macro and micronutrients.

If ingredients and micronutrients are added due to scientific and not legal reasons (see 7.8.5.), the need must be recommended by an advisory body commissioned by the Standards Committee of BFDI and the applicant organisation. The recommendations must be put to the vote at the Members' Assembly.

7.8.4. Ingredients, aids and additives – Infant milk formula

- Isolated nucleotides, hydrolysed proteins and taurine are specifically excluded.
- Permitted ingredients are milk and milk components, whey powder and milk fat and vegetable oils.
- Lactose, starch and malto-dextrin are also permitted ingredients.
- Added ingredients and micronutrients (vitamins and minerals, amino acids, fatty acids, choline, inositol and levocarnitine) will only be allowed if the legally prescribed content cannot be achieved with Demeter ingredients alone.

7.8.5. Products specific processing methods – Infant milk formula

- All processing stages will be optimised on the basis of the best realisable food quality.
- The spray drying process is permitted as is homogenisation of the total mass being processed.

7.9. Cooking oils and fats

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Sept 2020

7.9.1. Scope

The following standard treats cold pressed oils including virgin and extra virgin quality categories as well as oil for further processing. Oil for further processing covers oil as a processing ingredient as well as oil as a processing medium, for example as frying oil or release agent. The standard also covers the production of animal fats and margarine. Please consider additional legislative regulations concerning the production of oil especially concerning different categories of cold pressed oils.

7.9.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for cooking oils and fats are listed in the following section of the standard.

7.9.3. General principles – Cooking oils and fats

The maximum extraction temperatures for the individual oils are orientated to the usual legal requirements for the production of cold pressed oils in the different categories. Some examples listed below.

Lower **extraction temperatures** are recommended whenever possible.

- Olive oil: process temperature may never exceed 27° C
- Saffron and pumpkin seed oil 50° C

- Sunflower oil 60° C
- Maize, soy, sesame, and hazelnut oils 60° C

■ **Deodorising** (steaming) is to be declared on all packing units for consumers and processors.

7.9.4. Ingredients, aids and additives – Cooking oils and fats

- For filtering only **Asbestos free** filter material such as paper or cloth is permitted.
- For filtering and clearing **Diatomaceous earth** can be used.
- **Nitrogen** (N₂) as an aid is permitted.
- For the production of **margarine**, the lecithin used has to be at least certified organic. The use of **hardened (hydrogenated) fat** and **flavours** for the production of margarine is not permitted.

Ingredients, aids and additives – only oil for processing purposes

- For filtering and clearing **Bentonite** (Fullers earth) and **activated carbon** is permitted, but only for oil for processing purposes.

7.9.5. Product specific processing methods – Cooking oils and fats

- **Filtration, decanting** and **centrifuging** are permitted.
- Permitted processing methods for the production of margarine are **emulsification, pasteurisation** and **crystallisation**.

Cold pressed oils

- **Roasting the seeds** before pressing in the processing of pumpkin seed oil, sesame oil and nut oils is permitted. These products have to be additionally labelled as “cold pressed oil from roasted seed.
- **Conditioning/pre-warming** of the raw material, **extraction** using organic chemistry solvents and **mucilage removal** using mineral or organic acids are prohibited.
- The treatment with **active charcoal**, the **removal of acid, bleaching** and **chemical modification** (Hydrogenation, ester modification) are prohibited.

- For **palm oil** which will be sold as raw palm oil mucilage removal using acids and removal of acid are not permitted.

Oil for processing purposes

- Usual mechanical processes for cleaning and preparing the raw materials (including conditioning, drying with heat and **vacuum drying**) is permitted.
- **Removal of mucilage** and **neutralising/buffering** of pH (only once either before or after fractionation) is permitted.
- **Bleaching/colour removal** and **thermal fractionation** (decrySTALLISATION/dry fractionation) is permitted.
- **Steaming/deodorising** (once, with a maximum temperature of **230 °C**) are permitted.
- The **extraction** with organic solvents and chemical modification (Hydrogenation, Ester modification) are prohibited.

7.10. Sugar, sweetening agents and ice cream

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Sept 2023

7.10.1. Scope

The present section covers the processing and manufacture of plant syrups (e.g. from maple, sugar beet, palm, coconut etc.), plant juice concentrates and plant extracts, sweetening agents from grains/starch, malt extract, whole sugar (dried and milled sugar juice), raw cane sugar, beet sugar and cane sugar, ice-cream, sorbets and frozen yoghurt.

The Standard functions as a positive list, all methods, aids and additives not mentioned are prohibited. In cases of doubt contact your respective certifying organisation or the coordinator of the Standards Committee.

7.10.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for sugar, sweetening agents etc are listed in the following section of the standard.

7.10.3. Ingredients, aids and additives – sugar, sweetening agents, and ice cream

Sugar and Sweetening agents

- Enzymes meeting the general requirements of this standard are allowed for the processing of grain/starch sugar products.

- For the processing of sugar and sweetening agents **lime water** to remove unwanted materials is permitted.
- **Carbonic acid** to precipitate out excess calcium as calcium carbonate and oil to prevent foaming are permitted for the processing of sugar and sweetening agents.
- **Tannic acid** - from natural sources is permitted.
- Organic **ester sucrose** is permitted for the processing of sugar and sweetening agents.
- **Sodium carbonate, calcium** and **sodium hydroxide** are permitted aids for the processing of sugar.
- **Sulphuric acid** as an aid for pH control and **Citric acid** as an aid for clarification are permitted only for the production of sugar.

Ice cream

- Allowable thickening agents for ice cream are **carob bean gum, pectin, guar gum** and **agar agar**.
- **Inulin** and other oligosaccharides of organic origin for the processing of ice cream are permitted.
- **Colourings** are not permitted.

7.10.4. Product specific processing methods – sugar, sweetening agents, and ice cream

- Sugar syrup is evaporated under pressure at temperatures not high enough to cause caramelisation.
- No specific restrictions on the production of sugar, sweetening agents, and ice cream besides the general requirements listed in section 3.2. and 3.3.

7.11. Beer

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Sept 2020

7.11.1. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for beer are listed in the following section of the standard.

7.11.2. General principles - beer

Demeter beer must be produced using the “traditional art of brewing” based on processes and procedures appropriate to life. For this reason, beer production uses, in preference, materials that result themselves from natural processes (e.g. acid regulation using lactic bacteria instead of the addition of an acid).

Water used for the brewing process and for all other purposes must be drawn from ground water reserves showing the lowest levels of pollutants. It must be at least of drinking water quality, and have a nitrate content of less than 25 mg/l.

Simple upgrading of water quality, such as would be allowed for natural mineral water for human consumption, is also allowed for brewing water. The removal of iron and manganese by aeration is allowed. Elevated lime levels may be reduced by the addition of sodium carbonate.

The removal of alcohol from beer has not yet been regulated.

Beer is to be packed exclusively in glass bottles, or kegs/barrels of stainless steel or wood.

Single use cans are prohibited. The bottle labels are to be printed using inks containing no, or only low levels of, heavy metals. Covering of the bottles with silver paper is prohibited.

When buying in new beer crates, they are to be made of environmentally friendly materials (low-density polyethylene, with a low heavy metal content).

Bottle tops must have sealing elements that don't contain PVC.

Environmentally friendly cleaning materials and methods are to be chosen. Cleaning using alkalis and acids is allowed. If needed, hydrogen peroxide (H₂O₂) or peracetic acid can be used.

7.11.3. Ingredients, aids and additives - beer

- The only ingredients, which may be used, are hops, malt, and brewing water, only Demeter brewing cereals may be used to brew Demeter beer. Addition of fruit, herbs and spices in Demeter quality is allowed. The fruit is to be cleaned in potable water. Crushed fruit is to be pressed in a gentle manner.
- Unprocessed natural hop flowers have to be favoured. **Type 90 pelletised** hops may be used.
- **Type 45 pelletised** hops and hops extracts are prohibited.
- **Organic yeast** may be brought in or obtained from organic breweries. Only live, fresh yeast with no additives may be used. The yeast is to be bred and multiplied in the brewery itself on the wort which stems exclusively from Demeter raw materials, or if not available, from organic raw materials.
- **Lactic bacteria** may be used for lactic fermentation to produce Demeter speciality beers.
- **Water may not** be altered using the following processes: filtration with active charcoal, ion exchange, sterilisation of dirty water in particular with UV radiation, ozone, hypochlorite, chlorine dioxide.
- **Filter materials** made from textiles (e.g. cotton wool), Membranes (without PVC, PVPP, Asbestos and Bentonite) are permitted.
- **CO₂** may be used solely to temper the barrels and **N₂** for filling.
- **Diatomaceous earth** and **brewing gypsum** are permitted.
- **Sodium carbonate** for softening water is permitted.
- The use of food grade additives, **aromas**, **minerals**, **trace elements**, and **vitamins** is not allowed in the production of Demeter beer.
- The malt may not be treated with **sulphur**.
- Silicon dioxide (silica) is permitted as processing aid for the production of gluten free beer.

7.11.4. Product specific processing methods - beer

- Only **indirect** heat may be used for **drying** to reduce the danger of amine development.

- Procedures to **artificially accelerate** the speed of the wort boiling process, in particular the use of **silicic acid preparations** to hasten the **isomerisation of the hops** constituents is not allowed.
- The use of residues of beer as a **natural acidifier** is allowed.
- **Clarification aids**, in particular wood shavings, organic chipping impregnated with pitch and aluminium foil are prohibited.
- Specialist **light beers** are to be produced with yeast types that naturally produce less alcohol.
- **Accelerated fermentation**, using pressure or agitation is not allowed. All accelerated aging processes such as heating in storage are also not allowed. A heated chamber with a maximum of 25°C is permitted for second fermentation in the bottle only if the minimum outside temperature is below 10°C.
- The **correction of visual** or **taste shortcomings**, e.g. the removal of off tastes by flushing with **carbonic acid** and using **active charcoal filters**, or alterations to the colour using **beer colourings**, is not allowed.
- **Nathan Process** (fermentation and aging of beer in the same conical tank) is allowed.
- The use of materials to lengthen shelf life, such as **silicic acid preparations**, PVPP bentonite etc, is prohibited.
- **Hot filling** of the bottles and **disinfection filtration** to kill micro-organisms are not allowed, as they diminish taste and act as preservatives. Unstrained beer: Flash heating (Heating for a short time) with subsequent rapid re-cooling is permitted.
- Beers with elevated residual sugar content may be **pasteurised**.
- The disinfection of bottles with **sulphites** and the treatment of cork cap seals with **formaldehyde** are prohibited.
- In case of secondary fermentation in the bottle, sugar addition is permitted, only if the maximum addition does not exceed 2.5g/l beer, 7.5 g/l beer (secondary fermentation in the bottle of top fermentation beer respectively 10g/l Beer (top fermented champagne beers).

7.12. Wine and sparkling wine

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Oct 2021

7.12.1. Scope

The present standard covers the production of wine and sparkling wines. For other alcoholic beverages like fruit wine, cider, beer and alcoholic spirits please refer to the respective sections.

7.12.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for wine are listed in the following section of the standard.

7.12.3. General principles – Wine and sparkling wine

Ideally Demeter/biodynamic wine helps the development of nature and man, speaking to the senses and speaking to the mind. Demeter/biodynamic wine growing is not a means to an end. Its purpose is to enrich the world and to celebrate the beauty of landscape and life.

The aims and objectives are derived from the lectures given in the year 1924 by Rudolf Steiner and which are published and known as "The Agricultural Course". These lectures refer among other subjects to the cosmos (the heavens) as creating life forces in man, animals and plants and refer to the ways to make these life forces productive in agriculture and horticulture, including growing grapes. It needs the human being in the role of an artist to develop soil, fertility and plant in such a way that fruits of vital quality become available.

Demeter/biodynamic wine is made from biodynamically raised grapes. These grapes are the product of an extended Goethean view of nature that sees nature as an integrated body in

which material, form, warmth and rhythm all play a part. Out of this concept, the biodynamic method with its preparations, working in cooperation with the rhythms of the cosmos, specialised plant breeding etc. has grown. The aim is to move the vineyard more and more towards an individuality in its own right using these methods. The grapes produced by such a vineyard should be a true, unique, authentic expression of this individuality.

As the growth and ripening of fruit is dependent on the respectful combination of cosmic and material forces, the development of man is also dependant on a respectful interaction with nature and on appreciative communion between individuals. It is a sign of biodynamic quality development to foster these interactions. The character of individual Demeter/biodynamic wines will vary according to who and what has contributed to its emergence.

In making reference to artistically determined processes it is obvious that the application of the rules and conditions described in these guidelines cannot by themselves ensure the inclusion of life forces in produce. Section three of this standard in particular ensures that the rules and conditions described will avoid degradation of life forces as much as is presently possible.

Research in biodynamic production and in wine processing continues on a permanent basis. Therefore this standard will be subject to continuous improvement. Practitioners in fact are required to research in the areas of soil, plant and social development. They are required likewise to continually research ways to improve the processing of wine. In section three, the column listing aims indicates potential improvements to the processing method. These are to be used as a guideline defining directions for development.

Biodynamic/Demeter wine is offered to a discerning public. Customers are offered maximum transparency about the origin and the handling of Demeter/biodynamic wine including the use of additives or agents, even if they will only be temporarily in contact with the final product. Nothing shall conceal the true nature or the factual properties of the produce.

The quality of Demeter/biodynamic wine expresses itself as preserved vitality. This can be measured conventionally through the presence or absence of ingredients, and through other assessment techniques such as crystallisation and the study of formative forces

The work carried out in the wine cellar is a rounding off of the processes underlying grape production in the vineyard. As little technology is employed as possible and the fewest aids and additives used in all stages of the process. Aids and additives currently permitted should be reduced or phased out as processing techniques improve. The procedures should respect and be in harmony with the surroundings, the location, and the people involved in production. The primary aim is to at least maintain the quality present in the biodynamic fruit. (For that reason, harvesting the grapes by hand is preferred in order to guarantee the highest possible raw material quality for processing.)

All processing steps and methodologies used to process both the grapes as well as the ensuing products are to follow the following principles:

- The product shall be of high quality in sensory terms and digestibility, and taste well.
- Sulphur dioxide is to be used to the minimum.
- Processes that require large inputs of energy or raw materials are to be avoided.
- Aids and additives that raise environmental or health questions, from the point of view either of their origin, their use or their disposal, are to be avoided.
- Physical methods are preferable to chemical methods.
- All processing by-products, be they organic residues or waste water, are to be dealt with so that negative effects on the environment are minimised.

7.12.4. Ingredients, aids and additives – Wine and sparkling wine

The standards are defined in terms of a positive list of processes, ingredients, additives and aids. All other methods and materials not mentioned in this standard are excluded from the production of Demeter wine. Nevertheless, in order to emphasise the strict prohibition of some common processes and materials, the following are not permitted:

- The use of genetically modified micro – organisms
- Potassium hexacyanoferrate
- Ascorbic acid, sorbic acid
- PVPP (Polyvinylpyrrolidone)
- Diammonium phosphate
- Isinglass (Sturgeon swim bladder), blood and gelatine
- **Addition of sugar or grape juice concentrate** to increase the alcohol content by a maximum of **1.5% by volume** is permitted.
- For **sparkling wine**, the addition of sugar or grape juice concentrate for tirage is permitted at a maximum increase of alcohol through secondary fermentation of 1.5%.
- For the processing of **liqueur d'expédition (sparkling wine)** the addition of sugar or concentrated grape juice up to 50 g/l and of liqueur up to 6 cl/l is permitted.
- **Indigenous yeast** and **pied de cuve**. Brought in neutral yeast is permitted only for **justified stuck fermentation** (5 brix – sugar 50g/litre – or less) or for secondary fermentation of sparkling wines. If yeast is brought in:
 - for stuck fermentation, the yeast must be certified organic.

- for secondary fermentation of sparkling wines, the yeast must not have been grown on a petrochemical substrate or sulphite waste liquor.
- Only Demeter/organic **yeast hulls** are permitted, other yeast nutrients need approval by the respective certifying organisation (EXP XII : Chapter 7.21.).
- **Tartar stabilisation** only by cold stabilisation, only natural tartrate from Demeter or organic wine production are permitted, potassium bitartrate is permitted as well.
- For acidity regulation, **Potassium bicarbonate** (KHCO_3), **Calcium carbonate** (CaCO_3) and **Tartaric acid** (E334) are permitted. Addition limited to 1.5 grams/litre.
- **Lactic acid bacteria** as biological acid reduction are permitted.
- Preservation with **Sulphur** up to certain levels is possible. Following forms are authorised:
 - Pure SO_2 , as a gas or in solution
 - Potassium bisulphite
 - Potassium metabisulphite
- **Effervescent tablets** are not permitted.

Federation Licensees (certified by the International Certification Office)

The International Standards Committee has agreed the following exemption for Federation Licensees:

For acidity regulation, Tartaric acid (E334) is permitted up to a limit of 2.5 grams/litre under certain conditions.

Written exemptions must be requested individually.

Tab.: 27 / Addition of SO_2 to wine

| Residual sugar | SO_2 total [mg/l] at bottling | |
|------------------------------|--|-----|
| | White, Sparkling, Rose | Red |
| <5g/l residual sugar | 140 | 100 |
| >5g/l residual sugar | 180 | 140 |
| Sweet wines with Botrytis | 360 | |
| Sweet wines without Botrytis | 250 | |

- Permitted **fining agents** are, egg white, milk and milk products, Casein, and Pea, potato or wheat protein, Chitosan (only with an exemption from the respective certifying organisation) (EXP XVI : Chapter 7.19.).

- Inorganic permitted fining agents are **Bentonite activated charcoal, aeration, oxygen** including Micro Ox (Micro-ox allowed to prevent reduction in the early phase only).
- Permitted inorganic and organic **filtering materials** are **cellulose, textiles** (chlorine free), **polypropylene, diatomaceous earth, perlite** and ceramic tubes
- Permitted **bottling aids** are CO₂ and N₂.
- Only oak wooden barrels are permitted for oaking wine.
- Natural **pine resin** with no other aids or additives may be used in the production of traditional Greek **Retsina** wine.

7.12.5. Product specific processing methods – Wine and sparkling wine

- Pumps that develop high shear or centrifugal forces e.g. centrifugal pumps are not permitted in new installations or when replacing machinery.
- Heating of the red wine mash to a maximum of **35°C** is allowed. Use of heating and cooling to steer fermentation is permitted.
- **Pasteurisation** is not permitted.
- Concentration of the **entire must** is not allowed. **Alcohol reduction** by technical methods is prohibited. Addition of water to the mash/must is permitted.
- **Centrifuging** is permitted.
- Cross flow (tangential) filtration may only be used based on an exemption granted by the respective certifying organisation. This exemption (EXP XVIII : Chapter 7.21.) can only be used once per batch and only if the pore size is not less than 0.2 micrometres and the pressure used is below 2 bar. Furthermore, only for specific types of wines:
 - Wines without the addition of SO₂ in general
 - Natural sparkling wines (ancestral method / “petillant naturel”)
 - Sweet wines
 - Wines that develop lactic spoilage (e.g. white wine with languid fermentation)
 - Red wines with an organoleptic deviation (Brettanomyces)

7.12.6. Packaging and cleaning – Wine and sparkling wine

- Tanks of concrete, wooden barrels, porcelain, steel tanks, stoneware, clay amphora are permitted. Tanks of metal or concrete with epoxy and/or fibreglass may no longer be newly

acquired from 2022 onwards. Tanks made of these materials, which were purchased before this date, can still be used and be regulated by the respective certifying organisation. The treatment of all these containers with tartaric acid is allowed. Plastic vessels are restricted to transfer, not for storage.

- Permitted **bottling materials** are glass and other non-porous material made of clay such as stoneware or porcelain without internal coatings.
- Permitted **closures** are glass, cork, screw top, crown corks, plastic closures and technical closures based on cork.
- **Tamperproof seals** can be used without restrictions.
- **Cleaning** and disinfection of premises and equipment is being made exclusively by water, steam, sulphur, soft soap, caustic soda, ozone, peracetic acid, acetic acid, hydrogen peroxide, citric acid followed by flushing with potable water.

7.13. Cider, fruit wines and vinegar

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2022

Date of revision Oct 2022

7.13.1. Scope

The following Standard refers to the vinification of fruit juices, other than grape juice such as cider, cidre or apple wine as well as the production of alcoholic beverages from honey (mead). In addition, it refers to the production of vinegar from fruit and vegetable juices as well as wine and beer. For other alcoholic beverages like wine, beer or spirits please compare to the relevant product standards.

7.13.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for cider, fruit wines and vinegar are listed in the following section of the standard.

7.13.3. Ingredients, aids and additives – cider and fruit wines

- The aim is to produce **fruit wines** using indigenous **yeasts**. Specific biodynamic, certified organic or if these are unavailable commercial yeasts, following the general regime may be brought in.
- The addition of **sugar or fruit juice concentrate** to increase the alcohol content by a maximum of **1.5% by volume** is permitted. For **second fermentation** of sparkling fruit wines the addition of sugar is not restricted.
- **Metabisulphite** (E224) and **SO₂** (E220) are permitted up to a level of 50 mg/l for fruit wines and mead and 100 mg/l for sparkling fruit wines.

- For the clarification and fining of the apple juice to produce cider the use of **enzymes** and **CaCl₂** is permitted.
- For cosmetic reasons, clarification and fining **plant proteins** are permitted.

7.13.4. Ingredients, aids and additives – vinegar

- Alcohol as an ingredient is not permitted. Vinegar is either produced in a two-stage fermentation process or as flavoured vinegars (aceta). Flavourings have to be Demeter certified.
- For cosmetic reasons, clarification and fining plant proteins are permitted.
- In continuous processing methods and inoculation, starter cultures are to be obtained from own production. Functional cultures may be brought in only when re-starting the process in empty tanks. Where continuous production alternates with organic production, organic starters may not exceed 5% of the volume of the Demeter ferment production.

7.13.5. Product specific processing methods – cider and fruit wines

- Procedures to **artificially reduce** the alcohol content and procedures to **correct taste** or visual improvement using **colourings** are not permitted.
- Pasteurization is permitted.
- Filtration by means of the filtering methods described in chapter 3.3. is permitted.
- Cross flow filtration is not permitted.

7.13.6. Product specific processing methods – vinegar

- Traditional (Orléans method), generator method (packed generator or tethering method) and rapid vinegar processes (submerged fermentation process) are permitted.
- **Vinegar essences** are not to be produced, accordingly, also the production of vinegar from re-diluted concentrate, **synthetic vinegar** production methods are prohibited.
- Vinegar crème (Crema) must be produced through reduction of liquid without using starch or any other thickeners.
- Pasteurization is permitted.
- Filtration is permitted.

- Sulphuration is not permitted, sulphurated wine as a starting product, can be used.

7.13.7. Packaging – vinegar and fruit wines

- Fermentation shall occur in stainless steel tanks, ceramic, glass or wooden barrels.
- Tanks of metal or concrete with epoxy and/or fibreglass may no longer be newly acquired from 2023 onwards. Tanks made of these materials, which were purchased before this date, can still be used and be regulated by the respective certifying organisation.
- For vinegar in bulk packaging for large-scale consumers such as the gastronomy, plastic material in line with chapter 7.1. Packaging can be used. For all other purposes plastic material is excluded.
- For bottling, closures and tamperproof seals the same regulations as for wine apply, please compare to chapter 7.12.6.

7.14. Alcoholic spirits and alcohol for further processing

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Oct 2022

7.14.1. Scope

This standard is to define both the production of Demeter alcohol used as an ingredient in other Demeter products such as tinctures, as well as alcoholic spirits used as beverages. Alcoholic spirits used as beverages are restricted to spirits distilled from cereals, wine, vegetables (including agave), fruits, residues of vinification and fruit processing as well as liqueurs (aromatic spirits with a relatively high sugar content of at least 100 g/l). Other alcoholic beverages are defined in the relevant section of the BFDI processing standard (wine and sparkling wine, fruit wines and beer).

If alcoholic spirits are distilled from products like wine or fruit wine, the processing and fermentation of the initial product is ruled by the respective standard section.

7.14.2. General aids and additives, filtering material and processing methods

Aids and additives as well as filtering material and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for alcoholic spirits and alcohol for further processing are listed in the following section of the standard.

All other regulations of the general part as separation, storage and product flow apply without restriction. In cases where the malting process is outsourced, the respective processor shall be fully integrated into the certification process.

7.14.3. General principles – alcoholic spirits and alcohol for further processing

Biodynamic processors of alcoholic spirits are aware of their responsibilities. The outstanding taste and flavour experience should be the sole motivation for the considered enjoyment of biodynamic spirits. For this reason, the aim of the processing described here is consummate craftsmanship, classic fermentation and maturation based on expertise and time. All methods to speed up the process or to embellish or adulterate the taste are excluded.

7.14.4. Ingredients, aids and additives – Alcoholic spirits and alcohol for further processing

- Yeast for fermentation follows the general regime. The addition of sugar and other yeast nutrients is not permitted. If spirits are distilled from Biodynamic wine, fermentation of the wine is ruled by chapter 7.2. Wine and sparkling wine.
- Enzymes are restricted to pectinases and amylases and have to fulfil the requirements of the general section (chapter 3.3. Aids and additives). Enzymes may be used for malting cereals and mashing potatoes / corn.
- Yeast may be re-used after centrifuging from the must and washing. The centrifuged yeast may contain certified organic must if recovered from certified organic production. The certified organic ferment in continuous processing methods must not exceed 5% of the volume of the Demeter ferment. Yeast containing non-organic must is excluded.
- Alcoholic spirits for human consumption may be flavoured with herbs, spices, fruits, vegetables and roots. The use of flavouring ingredients follows the general regime. Certified wild harvest (e.g. juniper) is permitted.
- Liqueurs may only be produced based on alcoholic spirits, other alcoholic beverages like wine, food (like fruits) and sugar (including all types of sugar and syrups as well as caramelised sugar). For flavouring liqueurs aromatic extracts are permitted.
- Demeter alcohol for further processing may only be produced from food materials or food by-products (e.g. rotten materials, wood etc. are excluded)
- The malt and the mash may not be treated with sulphur.
- Any measures to simulate a longer storage and maturation like wood chips, sugar colour or caramel are not permitted.

7.14.5. Product specific processing methods – Alcoholic spirits and alcohol for further processing

- To reduce the danger of biogenic amines only indirect heat may be used for drying the malt.
- All types of distillation, also double or triple distillation are permitted.
- Flavoured alcoholic spirits for human consumption are made with maceration and percolation processes. Methods to speed up the production of flavoured spirits such as the compound or concentrate method are not permitted.
- Any activities to artificially speed up the maturation process are not permitted.
- All filtering materials according to chapter 3.3. Aids and additives may be used.
- Vegetable oils to prevent foaming are permitted, following the general regime.

7.14.6. Maturation and packaging – Alcoholic spirits and alcohol for further processing

- Alcoholic spirits must be-matured in stainless steel, clay vessels, glass or wooden barrels. Plastic containers are not permitted. For used and recycled casks, the aim is to purchase casks from Biodynamic wineries, if these are not available in the desired quality, other sources can be used. Due care must be taken to prevent contaminants from previous use from migrating into the Biodynamic product. The respective certifying organisation may demand cleaning protocols for casks of non-organic origin.
- Alcohol for further processing (non-food use) and alcoholic spirits may be stored in plastic.
- For bottling, closures and tamperproof seals the same regulations as for wine apply, please compare to chapter 7.12.6.

7.15. Cosmetics and personal care products

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Oct 2021

7.15.1. Scope

This standard defines the production of the following products to be labelled as Demeter and/or Biodynamic:

- Face, hair and body care products
- sun creams
- oral care products
- essential oils
- extracts, extraits, and tinctures
- waters & hydrolates (hydrosols)
- soaps, including liquid soaps e.g. shampoos and shower gels
- decorative cosmetics and cleaners
- perfumes

7.15.2. General aids, additives, filtering material and processing methods

Contrary to the basic systematics of this standard, the regulations on aids, additives, filter materials and processing methods are not regulated in the general part of the standard but in the following sections.

7.15.3. General principles – cosmetic and personal care products

The aim is to produce cosmetics that consist of natural ingredients, which are beneficial for the human skin and body, and have as few negative environmental consequences as possible. The raw materials of plant or animal origin are to be Demeter/biodynamic certified as far as possible. The task in the production of cosmetics is to maintain, or, wherever possible to enhance through the use of appropriate measures, the special qualities of the raw materials which have arisen through their having been grown according to biodynamic principles.

The aim is to use processes that respect inherent material qualities, and enhance them. For this reason, ingredients that have been through a rhythmical mixing process, (e.g. light/dark, hot/cold, sunrise/sunset) are preferred. Direct environmental influences during their manufacture, such as the presence of electromagnetic contamination should be considered and the negative effects kept to a minimum. Ingredients of agricultural origin must be processed in such a way as to minimise the loss of quality, including those life qualities arising from their biodynamic method of production.

Environmental effects of any production must be considered. This covers such areas as wastewater streams including waste hot water, reduction of contaminating waste back to the environment, energy usage, appropriate packaging choices and biodegradability of the product itself. Packaging materials are defined in section 7.1 of this Standard.

The products must have no ingredients that are genetically modified, or that have been produced using genetic modification techniques. Ionising radiation is also excluded from all production steps and no materials with particle sizes of less than 100 nanometres may be used (nanotechnology is excluded). Mineral oil is also excluded as a starting material.

Water plays a central role in many cosmetic products, in many cases being the largest ingredient. For that reason it should be of the highest quality. Water enhancement through rhythmic treatment can be beneficial. Pure best quality potable water. Spring water (including mineral water), distilled water or dynamised water is preferred. Water treatment must ensure high water quality. Water may be filtered or softened or UV treated.

The labelling of Demeter cosmetic products can be found in the labelling standard. Furthermore all cosmetic products have to meet higher ordered legal standards specifically regarding their security, effects, composition and labelling.

All ingredients must be individually listed in the ingredients list. The INCI (International Nomenclature Cosmetic Ingredient) system is legally required to be used. Parallel to it, the name of each ingredient should be listed in an appropriate language.

Environmental impact of processing

- Organic waste that does not pose an environmental contamination risk must be composted or handled in an environmentally friendly manner.
- Processing that involves hot water (such as distillation) must allow the water to cool before returning it to a natural ecosystem such as the soil or waterways.
- Hydrosols/waters containing additives such as preservatives must not be disposed of into natural ecosystems such as the soil or waterways.
- Packaging materials must meet the requirements of the BFDI Standard.

7.15.4. Classification in the cosmetics standard

In Demeter cosmetic ingredients will be classified according to their function and purpose within the concerning product. Three categories will be classified: actives, formulation ingredients/functional additives and perfume:

1. Actives are the ingredients that actually achieve the effect at body level. Ingredients with an active principle are natural extracts or fatty oils ideally used in Demeter quality, they are not isolated substances. Allowed processing methods are listed below in chapter (7.15.6.).
2. Functional Additives are substances that support the active ingredients in the cosmetic product in terms of formulation, function and texture, such as emulsifiers, thickeners and tensides. They are solely from a plant – or mineral – based origin and can be isolated substances, e.g. fatty acid esters. They have to be listed in appendix I. Isolated substances are produced exclusively for the cosmetic and food sector.
3. Perfumes are substances that unfold the effect of the cosmetic product via the olfactory senses. The perfume should only be pure and natural essential oils (derived from defined plants) ideally in Demeter quality or fractions derived of essential oils.

Not every ingredient can be linked to one of the three categories, some ingredients function in multiple categories. The latter have to be named as such in appendix I.

7.15.5. Quality and calculation of ingredients – cosmetics

- All ingredients of agricultural origin have to be either biodynamic or organic quality. The necessary proportions of Demeter – ingredients are described in the labelling section.
- If an ingredient of agricultural origin is unavailable in biodynamic or organic quality, that ingredient may be used in conventional quality under the following conditions:
 - Proof of unavailability is required in writing from three suppliers

- Multi-residue screen testing is required with limits meeting the BNN orientation values
 - The amount must not exceed 5% of the total formulation (EXP XV : Chapter 7.21)
- Semi processed and processed ingredients of other organic standards must be organic products that meet the processing methods of this standard. The standard has to be listed in the IFOAM family of standards.
 - Raw materials from wild harvest must be certified according to EEC regulations 834/2007 and 889/2008 or other valid organic laws and are considered to be equivalent to organic products. They are not counted as biodynamic ingredients but may make up more than 5% of the final formulation if adherent to the labelling section. An application fully documenting the procedure for minor collections whose frequency is less than annual, whose amounts do not endanger the plant population, and which make up less than 2% of the final formulation may be approved as an exemption by the respective certifying organisation (EXP XIV : Chapter 7.21.).
 - Formulation ingredients are based on organic certified palm oil and/or the palm oil has to have a proof of sustainability via certification (certified sustainable palm oil/RSPO ideally on “Identity Preserved” level) if available. If certified sustainable palm oil is not available, a proof from a supplier is required in writing.
 - Uncoloured and unbleached plant waxes are permitted.
 - By-products of animal slaughter can only be used if it stems from biodynamic animals. The scheme of unavailability applicable for other agricultural produce, see (2), does not apply.
 - Allowed raw material derived from living animals are dairy products, wool and uncoloured and unbleached waxes. When using lanolin (wool wax) the treatment of sheep with insecticides (dipping), the method of lanolin extraction, and the conditioning of the lanolin using solvents must be known. A written declaration is to be obtained from the supplier concerning these details. Each lot must be tested for the materials used and a residues analysis certificate supplied. The lanolin with the lowest pesticide contamination available must be used.
 - The following materials are not permitted either as solvents, or for any other purpose as an ingredient, additive or processing aid:
 - Mineral oils & petroleum derived products
 - Benzene
 - Hexane
 - Propylene glycol
 - Butylene glycol

- EDTA chelating agents and their salts
Raw materials obtained from dead animals (e.g. animal fats, animal collagen) or living cells
- Microbeads.

7.15.6. Specific processing methods – cosmetics

- This standard explicitly lists all permitted processes. All others are prohibited.
- The testing on animals, either on vertebrates or non-vertebrates, are prohibited. Consumer products and raw materials cannot be tested on animals for the first time since 1979.
- Ionising radiation is also excluded from all production steps and no materials with particle sizes of less than 100 nanometres may be used (nanotechnology is excluded) with the exception of compositions of earthy and mineral formulation.
- For actives within cosmetic products (see 7.15.4.) all (traditional) mechanical and biological processes for e.g. steam distillation, extraction, grinding, drying, mixing, freezing, chopping, sieving, washing, heating cooling and fermentation are permitted.
- Functional additives within Demeter cosmetic (see 7.12.4 (3)) are derived from natural starting materials such as oils, saccharides, proteins, lipoproteins, organic acids and may be modified by saponification, hydrolysis, esterification and trans-esterification, distillation, fermentation, neutralisation, condensation with the elimination of water, hydration, sulphation. The resulting products must be listed in the table I below.
- Essential oils are produced using steam/water distillation, CO₂ extraction, cold pressing, scarification, rectification (i.e. to take sensitising ingredients out as a vacuum redistillation only e.g. mint oil), fractional distillation (e.g. ylang ylang).
- For the production of extracts, extraits and tinctures, the raw materials are prepared using only mechanical, thermal, or fermentation methods. For extracts have no other extracting agents than water, fatty oil, ethyl alcohol, CO₂, glycerine, fruit vinegar, or mixtures of the mentioned substances are permitted.
- Hydrolats are produced using steam distillation only.
- Effleurage extraction must use Demeter or certified organic waxes or fats.
- For the production of soap, the raw soap may be produced only from raw material of Demeter/biodynamic quality, without any other ingredients. Only sodium hydroxide or potassium hydroxide, that has had no previous usage, may be used for saponification and must not exceed 10% of the formulation.

- Permitted solvents for extraction from raw materials are ethyl alcohol, fats and oils of plant origin, glycerine derived from fats or oils of plant origin, honey, sugar and vinegar. Solvents follow the general regime.

7.15.7. Ingredients – Non-agricultural origin

- Ingredients of mineral origin: salts (sodium, potassium, calcium and magnesium chlorides and sulphates), clays (including bentonite and diatomaceous earth), stone, precious stones, including silicic acid. Natural minerals that have not been chemically modified are permitted.
- Ingredients of metallic origin: precious metals, metals
- Pigments, made of minerals and agglomerated metal oxides meeting all other restrictions of the standard.
- If minerals or salt are used as an ingredient, a certificate of analysis and related documentation needs to be submitted in order to document that ingredients used do not contain any prohibited contaminants such as heavy metals or added ingredients such as free-flowing agents.
- Pure best quality potable water. Spring water (including mineral water), distilled water or dynamised water is preferred. Water treatment must ensure high water quality. Water may be filtered or softened or UV treated.
- Preservatives, antioxidants, surfactants/emulsifiers, alcohol, solvents (all functional additives) must be listed in appendix I.
- Synthetically denatured alcohol is not permitted.
- Botanical preservative systems shall be used in preference.
- Natural antioxidants are preferred (e.g. based on sage or rosemary).
- CO₂ as an extraction solvent is permitted.
- Naturally occurring enzymes (e.g. fruit enzymes) are permitted, documented GMO free and free from other prohibited ingredients.
- Synthetic fragrances are not permitted. Fragrances must be pure essential oils only, in Demeter/Biodynamic or certified organic quality, containing no colours or any other additives.

Appendix I

Permitted isolated substances (functional additives only)

In Appendix I additional functional additives can be listed if the following criteria are met:

Functional additives are produced by processes coherent with this standard; they are no active ingredients.

Some functional additives can act in a second category as active or perfume. This is noted behind each ingredient.

A

Allantoin extract (comfrey)

Ascorbic Acid

Ascorbyl Palmitate

B

Benzyl Alcohol

Benzoic Acid and its salts

C

Cellulose gum (for Peeling/toothpaste/gels to increase firmness)

Cetearyl Alcohol

Cetearyl Glucoside (rinse off products only)

Cetyl Alcohol

Cetyl Palmitate

Cetearyl Olivatate

Citric acid

Coco Glucoside (rinse off products only)

Coconut Alcohol

D

Decyl Glucoside (rinse off products only)

Decyl Oleate

Dehydroxanthan Gum

Disodium Cocoyl Glutamate

E

Ethyl Alcohol (from fermentation of organic plant material from agricultural origin)

G

Glycerine

Glyceryl Caprylate

Glyceryl Citrate

Glyceryl Cocoate

Glyceryl Distearate

Glyceryl Lactate

Glyceryl Laurate

Glyceryl Linoleate

Glyceryl Oleate

Glyceryl Oleate Citrate

Glyceryl Stearate

Glyceryl Stearate SE

Glyceryl Stearate Citrate

H

Hydrolyzed Wheat Gluten (active and functional additive)

Hydrolyzed Wheat Protein (active and functional additive)

J

Jojoba Esters (active and functional additive)

L

Lactic Acid (From fermentation of a GMO free carbohydrate substrate only) (active and functional additive)

Lanolin Alcohol

Lauryl Alcohol

Lauryl Glucoside (rinse off products only)

Lecithin

Lanolin

P

Polyglyceryl - 3 – Polyricinoleate

Potassium Cocoate

Potassium Olivat

Potassium Palmitate

Potassium Stearate

Potassium Sulphate

S

Sodium Cetearyl Sulphate

Sodium Cocoate x

Sodium Cocoyl Glutamate x

Sodium Cocoyl Hydrolysed Wheat Protein x

Sodium Gluconate x

Sodium Lauroyl Lactylate x

Sodium Olivat x

Sodium Palm Kernelate x

Sodium Palmate x

Sodium Stearyl Lactylate x

Sorbic Acids and their salts x

Stearic Acid x

Stearyl Alcohol

Sucrose Stearate x

T

Tocopherol (Vitamin E) active and functional additive

Totarol

X

Xanthan (E 415)

Permitted isolated substances (active ingredients)

In this category no further substances can be added by future revisions of this Standard section. Products based on a product approval before 2022 (by any certifying organisation) with one of these substances remain valid for an indefinite period. New products cannot be approved.

- Iron oxide (sun cream)
- Salicylic acid (for Peeling and Blemish control (Hygiene))
- Triethyl Citrate (for deodorants)
- Titanium dioxide (sun cream)
- Vitamins (except ascorbic acid and tocopherol)
- Xylitol (for Toothpaste) If extracted from maize, GMO free declaration required.
- Zinc oxide (sun cream)

7.16. Textiles

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2018

Date of revision Sept 2020

7.16.1. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for textiles are listed in the following section of the standard.

7.16.2. General principles - textiles

Textile raw materials (wool, cotton, linen, silk, flax, etc.) are agricultural products for which all the principles of the biodynamic method of production apply. Textile production differs from food production in that processing is always necessary. Just as the processing of food can degrade biodynamic qualities, so the processing of textiles can negatively affect the qualities of biodynamic fibres. Textile processing also uses a large number of chemical inputs (scouring, dyeing, etc.). These may lead to significant environmental damage and/or contamination of the end product.

The exclusion of specific toxic products in production is regulated by the Demeter Production Standard.

In processing, this aspect is regulated by the standards of the International Association of Natural Textiles (IVN) which have been chosen as the most suitable for the processing of Demeter textiles.

Demeter products always meet the minimum standards for organic textile products.*

* Approval requires the standard in question to have:

- Minimum organic ingredient content of 50% of the agricultural ingredients
- No ingredients in parallel (Demeter with organic/conventional)

- No GMO
- No nanoparticles

The licensee shall apply for approval by supplying proof that the above requirements are met by the standard in question, and they are certified to that standard.

7.16.3. Raw material, aids and additives - textiles

- All Demeter certified fibres (wool, cotton, flax etc.) maybe used in Demeter textiles. Certified fibres from properties in conversion to Demeter are acceptable if their share in the processed textile does not exceed one third of the overall content.
- Mixtures containing any fibres that come from Demeter certified agriculture are permitted. As long as silk or other natural fibre is unavailable in Demeter quality, the mixing with organic fibres is permitted.
- Demeter labelling of such products containing mixed fibres must contain a minimum of 66% Demeter fibre by weight.
- Cotton must be handpicked. Machine harvest is only permitted when the use of chemicals is excluded. Animal fibres are to be shorn or combed.

7.16.4. Product specific processing methods - textiles

- The standards of the International Natural Textiles Association (IVN) in their latest published edition apply.

7.17. Food, health and pharmaceutical supplements

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version June 2019

Date of revision Sept 2020

7.17.1. Scope

The present standard applies to products which supplement human nutrition or support medical treatment without being direct or mandatory subject to general food law or pharmaceutical law. This covers categories like food supplements, functional food, health supplements or pharmaceutical supplements.

Due to the fact that this is an international basic standard and national legal requirements respectively jurisdictions may delimit or classify those categories in different ways a clear and conclusive delimitation of this scope to certain product groups is not possible. Due to differing scopes of national organic standards or conflicts in horizontal law an organic certification as a pre-requisite for all Demeter products like formulated in the general part is subject to restrictions for this product standard. Accordingly, this condition shall only enter into force if a basic organic standard for the respective product category exists, in any case raw materials of agricultural origin must be covered by organic basic regulations.

Please note for some products and in some countries the reference to organic and therefore to Demeter may be even prohibited for food or pharmaceutical supplements. The licensee is fully responsible for a legally unambiguous classification and approval. It is highly recommended that national certifiers refer to this in the product approval process.

7.17.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for food and

health supplements as well as for functional food and pharmaceutical supplements are listed in the following section of the standard.

7.17.3. Ingredients, aids and additives – food, health and pharmaceutical supplements

- Concerning the use, quality and origin of raw material, minimum requirements for composition of a Demeter product and availability the general conditions for Demeter food products apply.
- As sticking agents: guar gum, gum arabic, maltodextrin, plant waxes, native starch, gelatine and pectin (E440i) are permitted.

7.17.4. Product specific processing methods – food, health and pharmaceutical supplements

- Drying and heating processes authorised under the general table of this standard are permitted. Spray and drum drying is permitted. Freeze drying with an exemption by the respective certifying organisation.
- Shaping extrusion within the formulated boundaries concerning pressure and temperature is permitted.

7.17.5. Capsules and coatings – food, health and pharmaceutical supplements

- The capsule or coating material shall not exceed 5 % of the product volume.
- As basic components animal proteins, gelatine or plant polysaccharides and oils of at least organic origin are permitted.
- Maltodextrin, sunflower lecithin, guar gum, gum Arabic and native starch of at least organic origin are permitted.
- Magnesium carbonate as releasing agent or mould releaser is permitted.
- Colourings are not permitted, the use of colouring ingredients in the form of vegetable powder or similar is possible.

The manufacturer shall ensure that the material does not contain any additives other than those listed above. Product specifications must be available within the context of product approval.

7.18.Soy products, cereal and nut drinks

International Standard for the certification of Demeter, Biodynamic® and related trademarks – Processing

Version Oct 2021

Date of revision Oct 2021

7.18.1.Scope

This sub-section of the BFDI Standard covers soy products like tofu and milk, wheat gluten like seitan and cereal beverages as well as beverages from nuts and seeds. This section does not refer to soy flakes, please refer to 7.4.

7.18.2. General aids, additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for soy products, cereal and nut drinks as well as similar products are listed in the following section of this standard.

7.18.3. General principles – soy products and cereal drinks

Product information in general shall not indicate, that plant-based drinks are a nutritional substitute for milk.

7.18.4. Ingredients, aids and additives – soy products and cereal drinks

- **Nigari** (Magnesium chloride) and **Calcium sulphate** are permitted coagulants (for setting the curd) for tofu and tofu products. Sodium bicarbonate is permitted as an aid/additive.
- Only hardwoods (as wood, shavings or sawdust) may be used for smoking soya products. Tropical hardwoods are excluded.
- In the production of cereal beverages, enzymes may be used to degum and saccharify the starch.
- Lecithin may be used if drinks from nuts are produced.

7.18.5. Product specific processing methods – soy products and cereal drinks

- For the preservation of drinks made from cereals, soy and nuts, the maximum permitted heat process is UHT (ultra high temperature).
- Beverages made from cereals, soy and nuts may be homogenised.

7.19. Chocolate, cocoa and confectionaries

International Standard for the certification of Demeter, Biodynamic® and related trademarks

Version Sept 2023

Date of revision Sept 2023

7.19.1. Scope

This standard is to define the production of Demeter chocolate, cocoa, cocoa containing beverages and sweets with chocolate as the main ingredient and confectionaries.

7.19.2. General aids and additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for chocolate, cocoa and confectionaries are listed in the following section of the standard.

7.19.3. General principles – chocolate, cocoa and confectionaries

Due to the raw materials used, special emphasis should be placed on the validity of the Demeter Standard for social responsibility.

7.19.4. Post-harvest treatment - Cocoa beans

- Drying the beans by means of sunlight is the preferred method. If this is not possible during the rainy season, artificial drying by means of hot air can be used. Fossil energy sources or wood are permitted, energy generation must take place at a sufficient distance from the product, open fire is not permitted.

- Drying on unprotected soil is not permitted. Drying beds made out of plastic are permitted. The use of plastic-free materials like wood, bamboo or metal is recommended.
- Debacterisation by steam, pressure or ozone is permitted.
- For pest control inert gas treatment (Nitrogen or Carbon dioxide), pressure or deep freezing is permitted.

7.19.5. Ingredients, aids and additive – chocolate, cocoa and confectionaries

- In the production of chocolate, the addition of fats and oils (e.g. palm oil) to replace cocoa butter or to influence the viscosity is not permitted.
- For the processing of chocolate, the use of lecithin is not permitted. For confectionary or sweets with chocolate the use of lecithin of organic origin as emulsifier is permitted.
- Gum Arabic as an additive for the processing of chocolate and confectionary is permitted.
- For the aromatisation and flavouring, only pure essential oils or pure extracts identical with the name giving raw material (and made using permitted extracting agents) are permitted.

7.19.6. Product specific processing methods – chocolate, cocoa and confectionaries

- Freeze drying is not permitted.
- Alkalisation (Dutching) of the of the cocoa nibs or the cocoa mass using potassium carbonate (K_2CO_3) or sodium carbonate (Na_2CO_3) is permitted.

7.19.7. Packaging – chocolate, cocoa and confectionaries

- Bagged goods of beans should not exceed 25 kg. The maximum permitted weight for bagged goods is 50 kg, unless purely mechanical transport can be proven. In case that supply chains have to be adopted to this requirement, the respective certifying organisation can grant an exemption (EXP XX : Chapter 7.21.).
- Aluminium, composite films with aluminium layers or metallized films are not permitted for these product categories.
- Paper, cardboard, PE-coated paper and plastic material in line with chapter 7.1.4. (PE, PP and composite films of PE and PP) are permitted for chocolate, cocoa and confectionaries.

7.20.Coffee

International Standard for the certification of Demeter, Biodynamic® and related trademarks

Version Sept 2023

Date of revision Sept 2023

7.20.1.Scope

This standard is to define the production of Demeter coffee.

7.20.2. General aids and additives, filtering material and processing methods

Aids and additives as well as filtering material, enzymes and processing methods are regulated in the general part of this standard (please see 3.2 and 3.3). Special requirements for coffee are listed in the following section of the standard.

7.20.3.Post-harvest treatment – Coffee beans

- Drying the beans by means of sunlight is the preferred method. If this is not possible during the rainy season, artificial drying by means of hot air can be used. Fossil energy sources or wood are permitted, energy generation must take place at a sufficient distance from the product, open fire is not permitted.
- Drying on unprotected soil is not permitted.
- Fully washed coffee is permitted. In the case of fully washed coffee a water management plan according to chapter 6.1.9.2.3. is obligatory for the farm as a whole. Please compare also to chapter 3.4. Process water.

7.20.4.Product specific processing methods – Coffee

- The production of Instant Coffee is permitted. Extraction by the means of steam is permitted. Corrosion protection agents used in steam generation must not be volatile. Spray

drying is permitted, freeze drying is permitted based on an exemption issued by the respective country organisation (chapter 3.2.1.).

- The production of decaffeinated coffee by CO₂ extraction or the Swiss water method is permitted, extraction by Ethyl Acetate, Dichloromethane or other chemical components is not permitted.
- The temperature during roasting coffee must not exceed 220°C, for roasting Espresso 240 °C.
- Aromatisation or deodorizing of coffee is not permitted

7.20.5.Packaging – Coffee

- Aluminium, composite films with aluminium layers or metallised films are permitted.
- Paper, cardboard, PE-coated paper and plastic material in line with chapter 7.1.4. (PE, PP and composite films of PE and PP) are permitted for coffee.

7.21. Approval of exemptions – processing and labelling

International Standard for the certification of Demeter, Biodynamic® and related trademarks

Version June 2020

Date of revision Sept 2023

The following exemptions are foreseen in the International Demeter Biodynamic Standard and can be approved by the respective certifying organisation. All approved exemptions are to be listed and reported annually to the AC.

Tab.: 11 / Overview exemptions for approval – processing

| EXP Nr. | Description | Reference chapter | Further criteria / restrictions |
|---------|---|-------------------|---|
| I | Freeze drying | 3.2.1. | Only certain applications, the necessity and nature of the technology used should be taken into account, the assessment is the responsibility of the respective certifying organisation |
| II | The use of X-rays for the detection of foreign bodies | 3.2.2. | |
| III | Enzymes containing preservatives | 3.3. | Based on a non-availability declaration by 3 suppliers |
| IV | Free flowing agents for salt | 3.3. | Salt may contain calcium carbonate (E170) or magnesium carbonate (E504) as an anti-caking or free flowing agent. For other |

| EXP Nr. | Description | Reference chapter | Further criteria / restrictions |
|---------|--|-------------------|---|
| | | | anti-caking or free flowing agents, a written approval by the respective certifying organisation is necessary. It has to be substantiated that it is impossible to use salt with calcium or magnesium carbonate or without anti-caking agents in the specific production process. |
| V | Products containing 66-90% Demeter certified ingredients | 4.4.2. | These products must also include either “This product contains between 66 and 90% Demeter ingredients” or the actual percentage of Demeter ingredients in an appropriate place on the label. |
| VI | Monochrome printing of the trademark | 4.5.2. | |
| VII | Pyrethrum with PBO (Piperonylbutoxide) | 5.4.2 | Only if PBO is present in materials legally required to be used |
| VIII | Non approved pest control measures | 5.4.4. | <p>The reasons given include at least:</p> <ul style="list-style-type: none"> ■ Advice and substantiation by a professional in pest control. ■ Description and specification of means and materials. ■ Description of the measures to avoid contamination of |

| EXP Nr. | Description | Reference chapter | Further criteria / restrictions |
|---------|---|-------------------|---|
| | | | <p>products after reusing the storage</p> <ul style="list-style-type: none"> Measures to improve prevention in order to avoid repetition. |
| IX | Active chlorine as cleaning agent for the processing of meat and meat products | 5.5.4. | |
| X | Plant proteins for cosmetic reasons, clarification and fining - fruits and vegetables | 7.2.3. | |
| XII | Yeast nutrients other than biodynamic or organic yeast hulls - Wine | 7.12.4. | |
| XIII | Other flavours than Demeter certified ingredients – alcoholic spirits | 7.14.5. | |
| XIV | Raw material from wild harvest – cosmetics | 7.15.5 | An application fully documenting the procedure for minor collections whose frequency is less than annual, whose amounts do not endanger the plant population, and which make up less than 2% of the final formulation |
| XV | Agricultural ingredient of conventional origin – cosmetics | 7.15.5. | <p>Following conditions:</p> <ul style="list-style-type: none"> Proof of unavailability is |

| EXP Nr. | Description | Reference chapter | Further criteria / restrictions |
|---------|--|-------------------|---|
| | | | <p>required in writing from three suppliers</p> <ul style="list-style-type: none"> ■ Multi-residue screen testing is required with limits meeting the BNN orientation values ■ The amount must not exceed 5% of the total formulation |
| XVI | Chitosan | 7.12.4. | For the fining of wine |
| XVII | Air freight | 3.4.3. | <ul style="list-style-type: none"> ■ Written sufficient reasoning why air freight is unavoidable ■ CO₂ compensation in at least the same amount |
| XVIII | Cross flow filtration | 7.12.5. | <ul style="list-style-type: none"> ■ Wines without the addition of SO₂ in general ■ Natural sparkling wines (ancestral method / “petillant naturel”) ■ Sweet wines ■ Wines that develop lactic spoilage (e.g. white wine with languid fermentation) ■ Red wines with an organoleptic deviation (<i>Brettanomyces</i>) |
| XIX | PVC in inner coatings of closure lids and caps | 7.1.3. | |

| EXP Nr. | Description | Reference chapter | Further criteria / restrictions |
|---------|---|-------------------|---------------------------------|
| XX | Bagged goods of cocoa beans exceeding 50 kg per unit without mechanical transport | 7.19.7. | |