

Bioland

Bioland e.V.
Verband für organisch-
biologischen Landbau

Amendments to the Standards

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1 Preamble

»» **No act contrary to nature remains without consequences. No natural principle can be breached without its being punished, no natural order of things be dispensed with without danger to ourselves. The integration of humans in the order of creation is a vital prerequisite for their lives.«**

Dr. Hans Peter Rusch

Dr. Hans Müller and Dr. Hans Peter Rusch, in their work on the care of the soil and the maintenance of its long-term fertility, established the organic biological method of farming. This is based on the exact observation of biological connections of the effects between soil – plants – animals and humans with the aim of achieving optimum care of biological regulation systems in the agricultural field.

Agricultural products are generated within a preferable closed operating cycle in the sense of a true original production. The mutual tasks of organic biological cultivation consist of:

- caring for the natural basics of the life of soil, water and air
- producing foodstuffs of a high health value
- carrying out active nature protection and the preservation of species
- avoiding to damage the environment
- keeping animals according to the needs of its species
- making a contribution towards solving the world-wide energy and raw materials problems
- creating the basis for the maintenance and development of independent farming structures

For decades farmers have been working according to the knowledge gained by Dr. Müller and Dr. Rusch and have mutually developed this further in their practical work. It has thus been possible for them in their fields of work to counteract the negative effects of the agricultural and social politics, to operate an environmentally friendly form of agriculture and, in co-operation with processors and consumers, to put a stop to the destruction of the existence of farmers. These farmers, gardeners, wine-growers and beekeepers in the Federal Republic of Germany combined to establish the BIOLAND e.V. Verband für organisch-biologischen Landbau (further in the text called BIOLAND) and have compiled the following standards.

The standards shall explain in detail the application of the organic biological methods of farming, describe the conversion to this method of operation and make feasible an inspection of the cultivation defined according to the standards.

It remains the mutual task of the people connected with BIOLAND to continue to work towards the aim of maintaining our natural basics of life and to improve the standards to keep them in line with the latest knowledge available.

EU regulation on organic farming

During the drafting process of these standards, the “regulation (EU) 2018/848 of the European Parliament and the Council dated 30th May 2018 on ecological/organic production and labeling of ecological/organic products as well as repeal of the regulation (EU) No. 834/2007 of the Council” as well as all other applicable downstream legal acts have been observed; hereinafter referred to in short as “EU organic regulation”.

BIOLAND members and contract partners are always obligated to adhere to the provisions of this EU organic regulation in their currently amended form. In case of discrepancies between the standards published here and the EU organic regulation, always the specifications of the EU organic regulation prevail. Further and supplement stipulations of the BIOLAND standards remain unaffected.

Notice

When in the following text the use of the trade mark BIOLAND is addressed, the use of the name of the association BIOLAND is likewise included.

2 General Stipulations

2.1 Genetic engineering

2.1.1 Exclusion of genetic engineering

Genetically or hereditary modified organisms in the sense of the release directive 2001/18/EC (GMO) as well as products derived therefrom are not compatible with the organic production method.

It is not allowed to use GMO's and/or GMO derivatives in foodstuff, animal feed or as foodstuff, animal feed, processing aid, plant protection product, fertilizer, soil conditioner, plant propagating material, microorganisms or animal in production, manufacturing and processing of BIOLAND products.

2.1.2 Definition of terms

“Genetically modified organism” (GMO) shall mean any organism as defined in Article 3 of regulation (EU) 2018/848 of the European Parliament and the Council dated 30th May 2018 on ecological/organic production and labelling of ecological/organic products.

2.2 Location

2.2.1 Selection of location

In the choice of the location, the load created by pollutants from the environment and from previous usage of the soil are to be taken into consideration. If there is danger of such a load, foodstuff and soil must be examined. Areas which have been affected by loads can only be used for organic biological farming when the loads involved have been reduced by suitable measures (e.g. protective planting). BIOLAND can prohibit the use of the trade mark BIOLAND for products which have been produced from land, partial land or border land contaminated by such loads.

The clearing of primary ecosystems is prohibited.

2.3 Air, soil and water protection

Water resources are not to be used excessively, the effects of water extraction are to be observed. Wherever possible, rainwater shall be collected and used. Any agricultural measures may not lead to salinization of soil and water.

Covering material like mulch and silo foils, forcing foils, fleeces, cultivation guard nets etc. may only be used if produced on basis of polycarbonates (e.g. polyethylene, polypropylene). Used foils shall be recycled if feasible. It is not permissible to burn used plastic in the fields.

2.4 Corporate use of machines and equipment

Machines and equipment which are also used in conventional production (e.g. in machinery cooperatives) have to be carefully drained and cleaned before being used on BIOLAND farms. This also includes mobile breaking and mixing plants for feedstuff. Regulations on duties on recording and documentation with regard to the critical checkpoints are to be taken into consideration corresponding to the regulation (EU) 2018/848 and the downstream legal acts as well as the particular administrative interpretations.

2.5 Advancement of biodiversity

2.5.1 Basic principles

It is the aim of the BIOLAND community of values to develop and to implement on the BIOLAND companies an agriculture of future which maintains, in the long run, the natural livelihood of the human being and all other creatures in its functionality. To protect and to advance the biodiversity is particularly important for its own sake and because it is the important basis for operative agricultural systems.

BIOLAND businesses already make an important contribution to the protection of biodiversity by organic farming. Moreover, each business performs additionally on the basis of the BIOLAND diversity standards.

2.5.2 Requirement

Annually, each BIOLAND business generates additional biodiversity services to the value of 100 points at least. The business can decide on its own which steps are to be taken out of the table of actions to reach these points.

BIOLAND businesses ascertain their biodiversity points by means of the BIOLAND biodiversity online tool and present the evaluation as well as the possibly necessary documents for certain measures during inspection. Deadline for entry is the 30th June of each year.

2.5.3 Basic principles of the points-based system

The biodiversity point system is based on a catalogue of measures pertaining to the overall operation including farmstead and the different types of landuse (e.g. field, pastures, fruit-growing, gardening).

The points are mainly awarded relative to the total size of the farm area or the area of a specific landuse to ensure that businesses of various sizes are equally evaluated. Businesses with numerous types of landuse can freely collect their points within the different types and do not have to observe any minimum demands per each type of landuse. However, the points of one type of landuse are always calculated relative to the total size of business on the basis of the BIOLAND demands. Individual measures, not included in the table of actions, can be taken into consideration as per BIOLAND demands.

The tables of actions are regularly customised and advanced on the basis of latest research results and practical experiences of the BIOLAND businesses.

2.5.4 Inspection

During annual BIOLAND inspection it is verified if the business has reached the possible number of points.

At a random spot check of 5 %, the inspection will be intensified.

2.5.5 Range of validity and transition periods

2021 and 2022 all BIOLAND business fulfil the standards by entering their data in the BIOLAND biodiversity online tool to the end of the year. 2023 all businesses shall prove 80 points to the deadline. As of entry deadline 2024, 100 biodiversity points will be required.

Businesses in conversion shall reach 100 biodiversity points at the end of their conversion period.

2.6 Renewable energies

It is the aim that BIOLAND businesses use energy efficiently and that a high share of this energy shall originate from renewable sources.

2.6.1 Operation of biogas plants and the use of fermentation residues

It is the aim of biogas plants to only ferment fermentation material coming from organic production. A sensible waste heat utilization and a rather high total efficiency shall be reached in order to achieve a rather high energy efficiency.

If it is necessary to cooperate with other agricultural businesses for operate a biogas plant in order to provide the necessary quantity of fermentation material, organic farms are to be preferred.

2.6.1.1 Requirements to biogas plants

Valid for biogas plants:

All fermentation materials shall be listed in Annex 10.1 (permissible soil conditioner and fertilizers as well as components of substrates).

At least 60 % of the fermentation materials shall originate from organic production.

Further 15 % of the fermentation materials shall also originate from organic production or may consist of following components:

- farm fertilizer from conventional businesses as per Annex 10.1.3
- plant growths of areas subject to nature protection directives
- plant growths of conventional clover/clover grass, lucerne/lucerne grass areas or legume mixtures, each without maize

The conformity of the fermentation materials is to be proved by suitable evidences.

The percentage shall be observed within a three-year average.

2.6.1.2 Requirements for the use of fermentation residues as fertilizer

Nutrients, which BIOLAND businesses add from their own production to a biogas plant or agrogas plant and return them as fermentation residues, are not regarded as additional purchase of nutrients.

Fermentation residues from biogas plants are classified as permissible fertilizer (see 10.1.4).

If a BIOLAND business additionally purchases fermentation materials for a biogas plant or agrogas plant and spreads the fermentation residues on its own areas, these fermentation materials are regarded as purchased manure and have to be considered in the calculation of the permissible quantity of purchased manure (refer to 3.4.4).

Valid for fermentation residues from agrogas plants: BIOLAND businesses may only return the equivalent quantity of nutrients as fermentation residues which has been added to an agrogas plant before from own production or purchased conventional farm fertilizer (as per 10.1.3).

All fermentation materials are to be listed in Appendix 10.1 (permissible soil conditioner and fertilizers as well as components of substrates).

Substrates from non-organic production being used as cosubstrate in biogas plant and agrogas plants may not be treated with mordants from the neonicotinoide substance group.

The observance of the demands for biogas plant and agrogas plants are to be checked and proved by conformity certificates.

2.7 Social responsibility

2.7.1 Basic principles

The respect and observance of human rights and social responsibility build the basis for the production and processing of BIOLAND products.

It is not allowed to use the trade mark BIOLAND in cases where the production is based on clear social inequity.

2.7.2 Structure of working and social conditions for employees

Employees subject to this standards are seasonal workers as well as workers of subcontractors in addition to the permanent employees.

For all humans working on BIOLAND businesses apply the legal requirements of the social and labour legislation. In particular, the following requirements are to be fulfilled verifiably:

All people working on a BIOLAND business receive equal opportunities independent of ethnic background, creed, gender, memberships and political convictions. Payments and all further benefits and offers made to the employees comply with traceable, commonly applicable principles, which eliminate each discrimination. BIOLAND businesses ensure that an employee representative is nominated or elected to represent the employees.

The businesses commit themselves to exclude forced labour or each kind of involuntary work. Businesses must not employ children. Children may only be occupied on the own family business or neighbour business and considering the legal stipulations. The following has to be fulfilled in particular:

- The work is not dangerous and does not harm neither the health nor the safety of the children.
- The work neither endangers the school development nor the moral, social and physical development of the children.
- Children are supervised by adults during work or are authorized by a legal guardian.

All employees have the right and freedom for association and organization to protect their interests. Nobody may be disadvantaged due to its membership in a trade union.

The employer is responsible for safety and health at the working place which includes possible training of the employees with regard to safety at work. In case of more than 5 employees instructions on “safety at work” shall be drawn up and made accessible to all employees.

All employees shall be provided with a written employment contract settling the principles of the employment and including at least the following points: job specification, scope of work and its limits, form as well as amount of remuneration.

Different kinds of employment relationships must not lead to unequal treatment of the employees. Also seasonal workers have to be registered as per legal stipulations. All employees obtain the same rights and working conditions, including social benefits and advantages – at same work and responsibility.

Wages are to be agreed at least corresponding to the legal minimum wage or the labour agreements, as far as applicable.

The employees are free on their decision to receive part of their wage in the form of accommodation, meal or other services of the businesses. The value of these benefits has to be fair and appropriate. An obligatory reduction of the wage by the business is not permissible.

Regulations to deal with overtime are to be agreed in correspondence with the seasonal work distribution, as well as regulations for flexible working hours. These regulations shall correspond to legal stipulations or labour agreements (as far as available and applicable).

The employer ensures a basic legal coverage for maternity, sickness and retirement.

The business does not constrain the legal demands of their employees on continuing education or apprenticeship.

3 Crop Production

3.1 Production in invigorated soil and preservation of soil fertility

Organic/biological cultures are produced in invigorated soil in connection with subsoil and parent material. Exceptions for horticulture can be seen in chapter 5.

The care of the soil and, correspondingly, the maintenance and the improvement of soil fertility constitutes a special point of emphasis in organic biological farming. A healthy, invigorated soil is the best prerequisite for healthy plants, healthy animals and healthy people. All measures of plant growing should form the basis for the improvement and care of a diverse and active soil life. Only the vitality of the soil itself will ensure long-lasting fertility.

3.2 Crop rotation

Crop rotation is to be planned in such a variable and balanced manner to fulfil the following functions:

- the maintenance of soil fertility
- the production of healthy plants
- the suppression of weed in fields
- the nutrition of animals using the operations own fodder
- the achievement of economically feasible yields without the use of chemical fertilizers and chemical products for plant protection

In order to fulfil these functions, crop rotation must contain leguminous plants as main or intermediate crops or as mixed cultures.

3.3 Soil preparation

The objective of soil preparation is the creation of optimum growth conditions for the crops. The compatibility with the soil life is to be taken into consideration in all measures adopted in soil preparation. Soil preparation must be carried out in such a manner that the natural soil structure is not excessively disturbed and that a loss of nutrients and unnecessary expenditure of energy are avoided.

3.4 Fertilization and humus management

3.4.1 Basic principles

The objective of fertilization is to achieve harmonic nutrition of the plants by means of a soil full of life. Organic material from the operation itself forms the basis of fertilization. It is mainly added to the soil by means of spread composting. Farm manure must be prepared and spread in such way that the life in the soil is supported and the humus content is maintained or increased.

3.4.2 Permissible external fertilizers

To complement the fertilizer produced in the operation itself and to compensate any nutrient losses caused by the operational cycle, fertilizers from external farms and organic and mineral fertilizers may be used as far as these are listed in 10.1.

The solubility of mineral fertilizers may not be increased by means of any chemical treatment. Farm fertilizers from conventional sources must be subject to careful composting. They may only be used when they are considered harmless in regard to their pollution content. If necessary a quality examination can be requested. Micronutrients may only be used when the deficiency determined cannot be removed by any other means.

3.4.3 Non-permissible fertilizers

The use of farmyard slurry and urine and poultry manure from conventional animal farming as well as of fermentation residues of biogas plants being operated solely with conventional fermentation materials is forbidden. In addition, the use of chemical synthetic nitrogenous fertilizers, easily soluble phosphates and other fertilizers not listed in 10.1 is prohibited.

3.4.4 Quantity limitation

The nutrient input from business-own animal husbandry is limited by the max. permissible animal stock density as per Annex 10.3 as well as by the demands of regulation (EU) 2018/848. The limits of subject-specific purchase of fertilizer as per Annex 10.1.1 are valid for buying fertilizer.

Nutrient purchase of organic fertilizer is only permissible if not exceeding the max. permissible animal stock density as per Annex 10.3. Please observe the limits of purchase as per Annex 10.1.1 and the demands of regulation (EU) 2018/848.

It is possible to set off given nutrients with taken back nutrients, if any roughage or straw produced on its own is directly given to another organic business and on the same time animal farm fertilizer is taken back from this business; this share will not be considered in the quantity limitation for purchase of fertilizer. The same applies for giving straw to organic mushroom producers and taking back removed organic mushroom substrate.

The conditions specified in Chapter 5 apply to gardening and perennial crops. In measuring the fertilizing, the reserves available in the soil must be taken into consideration.

3.4.5 Quality production and environmental compatibility

Fertilizing is to be designed in conformity with the location and the crops involved in such a way that the quality of the products (physiological nutritional value, taste, imperishability) may not be detrimentally affected in particular by the amount of nitrogenous fertilizer. In regard to the type, the amount and the time of applying fertilizer, care must be taken to avoid placing loads on the soil and the water (e.g. through heavy metals and nitrates).

3.4.6 Sewage sludge and compost

The use of sewage sludge is prohibited.

Compost from plant material and composted household waste from separate collection (bio-waste container) may only be used in case they correspond to BIOLAND criteria.

Peat substitutes (e.g. bark products) may only be used after prior analysis of their pollutant content and in agreement with BIOLAND.

3.5 Seeds, seedlings and plant materials

3.5.1 Choice of species

For growing, those species and varieties of plants should be used which are best suited for the conditions prevailing at the location, they should not easily be subject to disease and be of a high physiological nutritional quality.

In farming, varieties typical for the area should be used in preference to hybrid varieties.

The use of CMS hybrids originating from cytoplasm fusion is forbidden in vegetable growing.

As at 1st January 2022 the following is applicable for growing potatoes: starting from 2 ha total cultivation area within one year, a share of 10 % of the potato cultivation area shall be cultivated with varieties being above-average robust and resistant to leaf blight (*Phytophthora infestans*), corresponding to the BIOLAND variety list. Except from this are farmers growing early potatoes, cultivating max. up to 0,5 ha maturity group 3 and 4 and otherwise only varieties of maturity group 1 and 2.

Businesses not using copper preparations as per 10.2.2.2 are excluded from the duty cultivating a share of 10 % of above-average robust resp. resistant varieties.

3.5.2 Organically produced seeds and plant materials

When certified organic seeds and plant materials of suitable varieties are available, then these must be used. Any other sources require the exceptional approval by BIOLAND.

3.5.3 Treatment of seeds and plant material

Seeds and plant materials may not be treated after the harvest with chemical synthetic pesticides (e.g. disinfectants).

Care is to be taken when using conditioned seeds (pelleted seeds, seed plates, etc.) to ensure that the materials used are harmless in the sense of these standards.

3.5.4 Seedlings

The seedlings required in the businesses must be grown by the business itself or be purchased from other farms of the BIOLAND association, if here not available, in accordance with the requirements of BIOLAND from other organically managed farms.

Cultivation soils may only contain a maximum of 70 vol. % of peat (herbs in pots 80 %); for nurseries, herbaceous perennials and ornamental plants please refer to 5.8.6. Peat substitutes must be low in pollution and ecologically compatible.

3.5.5 Plant material for perennial crops

Plants must be purchased from BIOLAND nurseries or producers of propagating materials, if here not available, in accordance with the requirements of BIOLAND from other organically managed farms, if the required varieties and suitable qualities are available there. Other sources require BIOLAND approval. The plant material may not be treated after the harvest with chemical synthetic pesticides.

Observing BIOLAND demands, especially the observance of pre-order periods, is essential for granting special permit for conventional plant material in case of pomes.

3.6 Plant protection

3.6.1 Basic principles

The objective of organic-biological farming is to produce plants under such conditions that their infestation with parasites and disease achieves a point where this is of no or only minor economic significance. Appropriate measures for the achievement of this are balanced crop rotation, selection of suitable varieties, soil preparation in accordance with the location and the time of year, fertilizing in appropriate amounts and qualities, fertilizing by growing, etc. In addition, the spread of beneficial animals should be promoted by suitable means and measures such as hedges, nesting places, wet biotopes, etc.

3.6.2 Permissible measures

Special preventive measures should only be carried out using the agents which are listed in 10.2. They are only to be used when all other measures for activating the defensive powers of the soil and the plants themselves and the design of the location have been exhausted.

The legal regulations regarding their use are to be observed in using plant treatment agents.

3.6.3 Prohibitions

The use of synthetic pesticides and growth regulators is forbidden.

3.7 Weed regulation

3.7.1 Basic principles

The regulation of weeds is effected by preventive measures (e.g. crop rotation, soil preparation, variety selection), mechanical measures (e.g. harrowing, raking, hoeing) and thermal measures (e.g. burning off; steaming of the soil is only allowed as flat measure (up to 10 cm depth) in greenhouses and foil tunnels).

3.7.2 Prohibition of herbicides

The use of herbicides is forbidden.

3.8 Cleaning and disinfection

In case it is necessary to apply detergents and disinfectants at crop production – apart from observing the general principles for preventive hygiene and measures of mechanophysical cleaning – agents have to be used:

- which possess lowest possible effects on humans, farm animals and environment
- which preferably degrade easily and fast to uncritical decomposition products
- which generate low residues
- on the active substances of which quite extensive scientific knowledge and know-how shall be on hand

Annex 10.8 lists the permissible agents to be used as cleaning and disinfection means.

3.9 Wild collection

The collection of edible plants or parts thereof, growing naturally in natural areas or forests, where the only human interference consists of the harvest (collecting) of the products, is considered as wild collection, if the following conditions are observed:

- The collecting area must be clearly defined. It must be identified by the way of land register maps (if necessary drawing of plans).
- The collection in areas out of the area under the care of the BIOLAND is only allowed with prior approval.
- The collecting area shall not be under the direct influence of any sources of pollution.
- The areas have received no treatments with products other than those allowed by this standards (Annex 10.1 and 10.2) for a period of three years prior to the collection. This must be documented by appropriate means.
- The collection shall not affect the stability of the natural habitat or the maintenance of the species in the collection area.

Those products may be labelled with the trade mark BIOLAND with the addition “... from wild collection” (in case of processed products in the list of ingredients).

3.10 Plant breeding

These BIOLAND standards for plant breeding describe the basic principles of the organic-biological breeding. They are being enhanced continuously as per practical experienced gained in breeding and according to the latest scientific findings.

3.10.1 Basic principles

Organic-biological plant breeding is sustainable, fosters the genetic diversity and supports the natural ability of the plant for reproduction. It comprises a holistic approach, respects the natu-

ral barrier in crossbreeding and is based on fertile plants. At breeding process special attention is given to the plant and its relationship to the soil, the environment and the humans.

Organic-biological plant breeding and varietal development make a contribution to the regional food sovereignty of the humans. It serves the common welfare of the society.

Organic-biological plant breeding pursues the objective to sustain and to enhance seeds and varieties as cultural assets.

3.10.2 Breeding and selection

Any variety can be used as parents which have not been bred with a breeding method generally prohibited at BIOLAND plant production (for example genetic engineering).

The genome is respected as impartible unit. Technical encroachments upon the genome are forbidden (for example irradiation with ionizing rays, use of mutagenic substances, and transmission of segregated DNA, RNA or proteins).

The cell is respected as impartible unit. Technical encroachments upon a segregated cell on artificial media are forbidden (for example genetic engineering, resolution of the cell wall and destruction of the cell nucleus for cytoplasm fusion).

The fusion between ovule and pollen forms the new combination of the characters within the crossbreeding barriers typical for the plant.

The plants natural ability for reproduction of a new sort shall be sustained. Any technologies restricting the fertility at species reproduced by seeds are forbidden (for example so-called terminator technologies).

The selection is carried out on BIOLAND certified fields. In particular cases also other locations farmed organically can be used with the authorization of BIOLAND.

The use of molecular markers for diagnostic purpose (marker-support selection) is possible.

Records shall be kept on the entire breeding process in a traceable and transparent way (parents, technologies, locations and fields used, traceability of the generation lines etc.).

The information on the applied breeding technologies shall be made available latest with effect of initial marketing of a new variety.

3.10.3 Multiplication and maintenance breeding

The maintenance breeding and recovery is made on BIOLAND certified fields. In particular cases also other locations farmed organically can be used with the authorization of BIOLAND.

The use of meristem culture for the recovery (free of virus) of varieties reproduced vegetative like potato, strawberry, and raspberry is excluded from this settlement.

The reproduction of seeds and plant materials of an organic-biological cultured variety is carried out on all stages on BIOLAND certified fields. In particular cases also other locations farmed organically can be used with the authorization of BIOLAND.

3.10.4 Breeding objectives

Breeding objectives have to be defined referred to the crop.

Generally, the plant health is an essential feature. At breeding it is strived for a high resilience, tolerance or resistance against pests and diseases. Essential features like high nutrient efficiency with the competitiveness against weeds are as important as usually the achievement of sufficient and solid yields. Furthermore, breeding objectives like high vitality of the plants as well as nutritional and sensory qualities are taken into consideration for selection decision.

The aspect that nectar-seeking and pollinating vermin can benefit from the plants should also be taken into account.

3.10.5 Plant breeding in social context

The breeders of organic-biological cultured varieties may gain plant variety rights. Patenting, however, is not desired and not permissible.

The free access to genetic resources shall be sustained and the privilege for breeders has to be preserved. There shall be no feasibility to technically limit the cross-breeding (for example by male sterility without possibility to restore).

Breeding programmes shall have a participatory approach which means all members of the value chain (producer, trader, manufacturer, and consumer) shall have to be involved as far as possible.

3.10.6 Use of terms "variety cultured according to BIOLAND standards" and "from BIOLAND maintenance breeding"

Varieties "cultured according to BIOLAND standards" are generated from a continuous transparent organic-biological breeding programme which can be confirmed by authorized persons of the BIOLAND association.

A variety may be offered on the market with the notice "cultured according BIOLAND standards" if the demands stipulated in the standards are fulfilled and accepted by the BIOLAND association.

The note "from BIOLAND maintenance breeding" may first be applied in case the maintenance has executed at least for a period of 4 years on BIOLAND fields. Only biologically bred varieties may be marked with the note "from BIOLAND maintenance breeding". It falls to the assessment and explicit statement by BIOLAND if a variety can be regarded as biologically bred.

All sorts marked with a BIOLAND note shall fulfil the legal demands of the seed and variety right. The use of the terms "cultured according to BIOLAND standards" and "from BIOLAND maintenance breeding" in connection with market products like consumers' goods, feedstuff or seeds is only permissible in case also the respective final products are BIOLAND certified. In case using seeds of a variety "cultured according to BIOLAND standards" or "from BIOLAND maintenance breeding" for a product not certified by BIOLAND, it is forbidden to use the term BIOLAND for the finished product.

3.10.7 Subsequent acceptance

A variety, which has been bred before the coming-into-effect of these standards, may be accepted on application by BIOLAND as a variety "cultured according to BIOLAND standards" if attestable evidence can be provided to the adherence to the demands of these standards.

4 Animal Husbandry

4.1 Importance and aims of keeping animals in organic-biological operation

Keeping animals is a sensible link in the operational cycle.

Keeping animals in accordance with the needs of the species and their considerate care by humans form the prerequisite for the health, the performance and the well-being of the animals. Prerequisite for the production of high-quality and wholesome foodstuffs is a high level of animal health and well-being. For this purpose, each animal-keeping business cares for an adequate animal housing by means of suitable management measures.

With the help of the animals, the feed produced in the operation is used for the production of high quality foodstuffs.

Animal keeping is to be designed in such a way to ensure a low-loss production, storage and spreading of the farm manures occurring at keeping animals. This serves to maintain and improve the fertility of the soil in the operation.

Animals for own needs

There are special BIOLAND standards for farm animals which are used exclusively for own needs with regard to upper limit of animals, requirements on animal keeping, feeding and purchase of animals. It is not permissible to keep BIOLAND animals and animals for own needs of same species at the same time.

4.2 Requirements in the keeping of animals

4.2.1 General

4.2.1.1 Basic principles

Keeping animals in accordance with the needs of the species must be the objective of every operation. This means that the behaviour peculiar to the species in question, such as behaviour in movement, rest, ingestion of feed, social contact, comfort and reproduction is made possible as far as feasible. Basic principle for the adherence to the BIOLAND standards is the observance of the valid regulations and special laws for animal husbandry. To promote robustness and vitality, the animals should often be allowed to face the weather and climatic conditions of the location. Keeping animals in a manner peculiar to the species involves providing sufficient space for movement and rest throughout the year, natural light, and shade, protection against wind, fresh air and fresh water.

The housing buildings have to offer a suitable stable climate corresponding to the animal species and the age of the animals, among others referring to temperature, humidity, air circulation, dust nuisance and concentration of harmful gases.

The possibility to have access to open air run and/or grazing is mandatory for all animals, unless there are other regulations, for example within the scope of animal disease control.

Deviations from behaviour, injuries and illnesses as a result from keeping the animals must be avoided.

Herd animals may not be kept individually. Keeping animals individually is permissible only in case of male animals for breeding purposes, in case of sickness, versus the end of pregnancy and in small stocks.

Animals are to be sufficiently protected against predators.

4.2.1.2 Space requirements

Requirements for in- and outdoor areas of the livestock housing system are listed for each type of animal in Annex 10.6. For the keeping of fallow-deer and red deer the regulations in chapter 4.2.7 apply.

Housing systems for mammals with no clear separation between in- and outdoor area have to fulfil space requirements in sum.

In case of housing systems for ruminants and horses with free range barn and access to pasture in summer, the space requirements for outdoor area according to Annex 10.6 can be skipped. In this case permanently accessible, durable and non-roofed barn area can be taken into calculation of the total barn area.

In regions with suitable climatic conditions, allowing animals to be kept outdoor all year round, housing is not stipulated.

4.2.1.3 Movement and rest area

Barns with fully perforated floor area (fully slatted floors, flat decks, cages) are not permissible. The width of slots and holes in case of perforated floors have to be adapted to animal size. Slatted floors must be in excellent technical condition. Surface slats are to be preferred.

The majority of accessible movement and rest area for each mammal category must be a solid floor area (no slat floors).

The tread surface must be non-slip and of tread proof nature.

A soft, dry and clean place in which to rest is to be ensured at all times for ruminants, pigs, horses and rabbits by means of strewing (as a rule, straw).

Straw for bedding purposes should, as far as available, be from the farm itself or from other organic farms. Conventional straw for strewing should be grown on lands with a minor degree of farming intensity and should not be treated with glyphosate-containing herbicides at pre-harvesting procedure.

4.2.1.4 Access to and care of open air run

Access to open air run and pasture has to be afforded always when physiological, climatic and soil conditions allow for this.

The stock density of animals on outdoor areas may not result in the soil being trampled down – with the exception of feeding and drinking areas. Over-grazing has to be avoided.

4.2.1.5 Construction and maintenance of livestock buildings

For new livestock buildings the location shall be selected to have large grazing land available. The location shall be agreed upon with BIOLAND.

Building of new barns or extensions to barns above 3.000 laying hens are to be approved by BIOLAND before start of work. In construction and maintenance of livestock buildings ecological issues have to be considered. Substances hazardous to health and environment in building materials and its treatments have to be avoided, if possible. Native building materials have to be preferred.

The use of non-regenerative energy resources in the construction and maintenance of stables has to be reduced, if possible.

New constructions and modifications in animal husbandry shall correspond to the latest know-how on species-appropriate animal husbandry.

New barns for ruminants are to be carried out as non-penned cowsheds. New tied-up barns are not permissible.

Planning of new constructions and modifications are to be agreed with BIOLAND.

4.2.1.6 Common pastures and joint animal husbandry

Subject to further official regulations, the animals intermittently can pasture on common areas, unless these common areas have not been treated with products and subject matters during the last three years not permissible for organic/biological production. Conventional animals pasturing on common meadows shall have breed in an environmentally sound manner.

Products of organic animals, being produced during the time of pasturing on common areas, cannot be regarded as organic/biological products, unless it can be proved that the organic animals have appropriately separated from the conventional animals.

It is feasible to husband conventional animals, pasturing on business areas, subject to further official regulations and if it is a question of another kind of animal or it is ensured to completely separate them from the own animals of the same kind. Please consider the arising manure when purchasing foreign manure.

The common husbandry of own and foreign animals is only possible if all animals on the businesses are husbanded completely according to these standards at any time.

4.2.2 Keeping cattle

4.2.2.1 Dairy cattle and suckler cow keeping

Cows shall have access to pasture during vegetation period.

The min. grazing area is 600 m² per each livestock unit (HI-animal) during the total vegetation period. In case of extremely wet or dry conditions the grazing may be suspended for a short term. Only for BIOLAND businesses already existing on 1st December 2018 the following is valid until latest 31st December 2030: In case it is not possible to offer constant grazeable area to a sufficient extent, open air run available all-the-year, as stated in 10.6 of the standards, shall be presented apart from possibly existing partial pastures.

As an alternative, open air run available all-the-year, as stated in item 10.6 of the standards, can be offered to individual animals or animal groups which have to be cooped-in (e.g. for covering, insemination, feeding before calving (3 weeks), freshened cows (2 weeks), in case of danger through predators, etc.) (irrespective to this, 4.2.1.2 is still valid). Individual sick and calving animals are excluded from the obligation to open air run.

In order to offer sufficient pasture, grazeable areas on grassland and arable land shall be set up near to the barn within the scope of usual crop rotations and corresponding qualities of the soil. Free calving under pure hygienic conditions shall be made possible.

4.2.2.1.1 Non-penned cowsheds

Efforts should be made to have non-penned cowsheds which allow the cattle freedom of movement.

Dead ends and bottle necks in the non-penned cowsheds are to be avoided.

If outdoor grazing in summer is not possible due to lack of available areas for grazing, then access to open air run as per Annex 10.6 has to be afforded all year round.

In winter the possibility of regular movement in the open air run should also be afforded.

There must be a place in the non-penned sheds for each animal to sleep and eat. A slight reduction in number of eating places is possible with the permission of BIOLAND in case of permanent availability of fodder (storage feeding system).

Boxes in which the animals can rest must enable the animal to lie down and rise up in a manner in compliance with the species.

4.2.2.1.2 Tethering system

Subject to the permission of the inspection bodies, tethering system for small holdings is possible provided the cows have access to pastures during the grazing period and at least twice a week access to open air run when grazing is not possible.

Tethering of single animals for security or animal protection reason is possible with the permission of BIOLAND as long as it is limited in time.

If the animals are kept tethered, the width, the length and the technology used in tethering and the design of the edges of the trough must allow the animal to stand up, lie down or eat in a manner suitable for the species and must allow the animal sufficient body care.

The cows must be able to fully stand and rest on the level, secure surface, which has to be strewn sufficiently.

Rigid neck frames and tightly drawn chains or nylon belts are not permissible. Electric cattle trainers are forbidden.

4.2.2.2 Cattle for breeding and beef

All cattle for breeding purposes and for beef should have the possibility of free movement throughout the whole year.

Cattle for breeding and beef cattle above 12 months shall have access to pasture during vegetation period. The min. grazing area is 600 m² per each livestock unit (HI-animal) during the total vegetation period. In case of extremely wet or dry conditions the grazing may be suspended for a short term.

Only for BIOLAND businesses already existing on 1st December 2018 the following is valid until latest 31st December 2030: In case it is not possible to offer constant grazeable area to a sufficient extent for this category, open air run available all-the-year, as stated in 10.6 of the standards, shall be presented apart from possibly existing partial pastures (irrespective of this point 4.2.1.2 is still valid).

Bulls can alternatively be offered an open air run available all-the-year, as stated in item 10.6 of the standards.

Breeding systems shall ensure maximum access to pasture to different times of the year, depending on the availability of meadows. As an alternative, open air run available all-the-year, as stated in item 10.6 of the standards, can be offered to female animals < 12 months and for single animals or animal groups which have to be cooped-in (e.g. for covering, insemination, in case of danger through predators, etc.), if no access to pasture is available to sufficient extent, ensuring animal welfare and health, for reason of local situation. Individual sick animals are excluded from the obligation to open air run. In order to offer sufficient pasture, grazeable areas on grassland and arable land shall be set up within the scope of usual crop rotations and corresponding qualities of the soil, provided that with this a practicable infrastructure for pastures can be created.

Keeping beef cattle in stables with access to open air is permissible only during the end of the fattening period to a maximum of 1/5 of the life time, but in any case no longer than 3 months and subject to further official regulations.

Tethering is permissible for breeding and beef cattle of an age over one year. In this case the same requirements as described in chapter 4.2.2.1.2 apply.

4.2.2.3 Calves

The calves should be able to stay with the mother for at least 1 day following the birth. The keeping in individual boxes after the first week of life is forbidden, except it is necessary for individual animals for veterinary reasons and just for a limited period. From their second week of life, when the number kept is correspondingly large, the calves must be kept in groups.

Tethering of calves and young cattle under the age of one year is not allowed.

4.2.3 Keeping pigs

Pigs must be allowed access to open air run.

The min. stable areas as well as the min. outer areas as per Annex 10.6 has to be designed at least half in a solid construction. Stables not fulfilling this requirement are granted a transition period until 1st January 2029, subject to approval by inspection body.

With the exception of the late pregnancy period and the suckling period of sows, pigs have to be kept in groups.

Tethering of sows is not permissible.

Fixing should only be undertaken with problematic animals during and after farrowing.

A wallowing area should be available.

During the summer months period breeding pigs, wherever possible, are to be afforded access to a pasture. The pasture should have shady areas and an area for wallowing.

Free-range husbandry with outdoor climate shall have access to shelters and other possibilities, enabling the pigs to control their body temperature.

4.2.4 Keeping sheep and goats

The stables must be designed in a non-penned manner.

Sheep and goats shall have access to pasture during vegetation period. In case it is not possible to offer constant grazing area to a sufficient extent, open air run available all-the-year, as stated in item 10.6 of the standards, shall be presented in addition to the meadow.

Breeding systems shall ensure maximum access to pasture to different times of the year, depending on the availability of meadows.

In order to offer sufficient pasture, grazeable areas on grassland and arable land shall be set up near to the barn within the scope of usual crop rotations and corresponding qualities of the soil.

4.2.5 Keeping poultry

4.2.5.1 Laying hens

Building of new barns or extensions to barns above 3.000 laying hens are to be approved by BIOLAND before start of work.

Also the inception of new businesses with an animal stock above 3.000 laying hens has to be explicitly authorized by BIOLAND.

4.2.5.1.1 Barn

Laying hens can be kept in barns with barn farming or perchery systems with porches or insulated outer area and with open-air run.

The individual barns with a maximum of 3.000 laying hens have to be separated completely (feedstuff chain, egg belts, way out for manure, air conditioning etc.) in such a way, that a pressure of infections which may exist and/or a contamination with parasites will be diminished, and to ensure a sustainable management of the greened area for movement. In one building a maximum of 6.000 hens may be kept.

Per each m² of movement area in the barn accessible to the animals, 6 animals can be kept.

Movement area that accounts for the calculation of the animal stock density has to fulfil the following requirements:

- minimum width at least 30 cm
- maximum slope 14 %
- in case of gritted floor minimum wire strength to be kept at 2 mm
- free height between floor levels or perch rods at least 45 cm
- durable floor area has to be covered with suitable strewing material in sufficient thickness
- laying nests, its landing grids and higher perch rods are no moving areas and can thus not be accounted for in animal density calculations

The stock density of more than 6 hens per each m² accessible area in the inner barn area may be raised if, instead of a porch, an insulated exterior area is used as an integrated barn area (also refer to 4.2.5.1.2).

This is the case if:

- The animals have free access to the barn via all openings all around the clock.
- It is roofed, and equipped with a controlled lighting, fencing and wind protection possibility, which enables to maintain the barn climate in the warm area.
- It is insulated the way not having constant exterior climate.
- The whole exterior area calculated for animal density is strewn with sand or similar.
- It has a height of min. 2 m.
- It is nearly located on the same level as the barn; a level difference between barn and exterior area is limited to max. 50 cm (in case of higher level differences, a sufficient circulation of animals can be reached by the construction of balconies and climbing and descending supports).

Max. 8 laying hens per each m² movement area inside the stable (warm area) can be kept in barns with integrated insulated exterior area.

In aviary layer systems max. 2 elevated levels may be arranged above each other. For laying hen barns, still having 3 elevated levels at the time of coming-into-force of these standards, there is a transitional period until 1st January 2029, subject to approval of inspection body. In this case, the max. animal density of 12 animals per each m² barn floor area may not be exceeded in relation to the barn inside (warm area). The aviary system shall offer the animals unhindered access to the open-air openings and the open-air areas. The barn has to be designed in such a way that animals will have the least possible contact with excrement. The different floor levels accessible to laying hens have to be arranged in such a way that excrement do not fall on the level beneath it. Efficient manure handling systems shall ensure this.

At least 1/3 of the moving area in the barn for all animals must be available as strewn area for the purpose of scratching. In barns with integrated exterior area this third refers to the interior area of the barn. The strewing material has to be at least 5 cm deep and must be kept dry, loose and clean.

The barn has to be lighted sufficiently with day light. The window area has to be equivalent to at least 5 % of the barn floor area. Natural day light may be extended to a maximum of 16 hours by artificial light.

The offered space for feeding, feeding dishes and the strewn area for the application of feeding seeds have to be designed in such a way, that all animals can forage together.

The animals should be able to take water from an open water surface. The animals are always offered fresh and clean drinking water.

At least 18 cm of perch rod have to be provided per each animal. In barns with excrement pits at least 1/3 of the perch rods have to be elevated at least by 45 cm. The profile of the perch rods must have at least 30 x 30 mm, the upper edges of the rods have to be rounded. For the total perch rod length only such perch rods are accounted for, that are not above the litter area, that have at least 30 cm horizontal axis distance from each other and at least 20 cm distance from the walls.

For the laying of the eggs the animals must have available sufficient strewn laying nests or rolling nests with smooth rubber studs or similar material. For 80 laying hens 1 m² family nest has to be available, a single nest of 35 x 25 cm is sufficient for a maximum of 5 hens.

The animals must have permanent access to a dust bath, if possible in a winter garden or isolated exterior area.

The barn openings to the insulated exterior area or veranda and the access to the outdoor are to be measured in such a way that the animals can circulate without problems and unrestricted.

The barn openings have to add up to a combined length of 1 m per 150 hens. The minimum measures of the openings are 50 cm width and 45 cm free height.

In order to ensure the water supply for the animals at extreme weather conditions, the closing flaps between the warm area and veranda may be closed as an exception during the dark rest period.

Between charging the barn has to be cleaned and disinfected. Only the substances listed in annex 10.7 are permissible for use.

4.2.5.1.2 Veranda/exterior barn area

The veranda or the isolated exterior barn area respectively, which is protected from the influences of weather and has a water-impermeable floor plate, has to be a part of the barn floor area. It shall not be subject to the climate conditions of the barn. This area must be separated from the barn and strewed-in and the laying hens shall have direct access.

At least 1 m² of paved, roofed exterior barn area (or veranda) per 12 laying hens is mandatory. Excepted from this are mobile barns.

An isolated exterior barn area or veranda is not required for small stocks, if the number of 4 hens/m² will not be exceeded in the warm area. It is considered to be a small stock in case the number of animals of total 140 laying hens at annual average is not exceeded; this rule is valid cumulative at poultries for fattening.

An isolated exterior barn area can be declared as an integral part of the barn and be accounted for in the calculation of the animal density provided it fulfils the conditions mentioned in chapter 4.2.5.1.1.

At least 1 running meter shall be available for 150 animals as opening to the exterior green area.

4.2.5.1.3 Green open air run

A green open air run is mandatory.

All laying hens shall have possibility to use the exterior area completely and uniformly.

To each animal at least 4 m² of green open air run in a perimeter of 150 m has to be available.

With effect 1st May 2014 the following is applicable for new BIOLAND businesses and for building new barns or extending barns on existing businesses: regeneration areas are to be provided within a perimeter of 150 m in the open air run.

For laying hen barns on BIOLAND businesses existing until 30th April 2014 regeneration areas for open air run are to be provided if spatial situation allows for. The distance of areas exceeding 4 m² may thereby also be more than 150 m in perimeter, if the structure of the open air run ensures the use by the animals, however, max. only 350 m.

To separate herds or groups fencing is necessary. Except for the reasons stated hereafter, daily access to exterior green area shall be granted. It is necessary to keep records on the access to open air independent from the numbers of animals kept. This is to prove that access to open air has been granted at least for one third of the animal's life. The access to exterior green area can be limited or stopped in case the whole herd is subject to a veterinary care, in case of adverse weather conditions which contradict to the access especially for reason of animal health, during period of acclimatisation of young hens as well as other official directions.

Measures have to be taken that a nutrient intake of 170 kg N per ha roaming area and year must not be exceeded. Strongly used areas close to the barn are to be strewn with bark shred or similar and designed in such a way that the strewing or soil material respectively, enriched with nutrients, can be replaced periodically, latest before next recharging of the barn.

Plants must grow on the majority of the outside roaming area. Frequent and sufficient resting periods have to be scheduled for the regeneration of vegetation.

The green open air run area has to offer protection from enemies and shade to the animals, so that they will use the area in an equally distributed manner. Thickets will be planted for a natu-

ral structure of the whole roaming area. Shading or wind protection nets will provide artificial possibilities of shelter. Any constitutional elements and provisions for shelter shall be designed that the animals can effortlessly beat the distances within the exterior area.

4.2.5.1.4 Mobile keeping of laying hens

The general requirements on keeping laying hens are valid for mobile barns, unless expressly stated otherwise here.

For a mobile barn at least three entirely separated locations shall be at disposal. For the reason that the green open air run area can replenish at the best and the nutrient intake coincides with nutrient abstraction, the barn has to be changed at least four times a year, whereby all locations have to be used.

If the barn is not displaced during period of dormancy of vegetation (approx. mid of October until approx. mid of March), it will have to be placed to a winter location; a stock density of max. 4,8 animals per m² roofed accessible area may not be exceeded.

4.2.5.1.5 Laying pause

It is permissible to grant the laying hens a laying pause for recovery under the following minimum conditions:

- minimum barn area shall be observed (6 hens per m² accessible barn area)
- limited period (no access to green area, light) max. 7 weeks
- sufficient provision of light, but always with day light. The provision of light may be restricted to 5 hours per day
- feedstuff and water ad libitum
- information on laying pause before beginning of the moult at the inspection authority or body

4.2.5.2 Young hens

The regulations on laying hens as described above apply for young hens respectively as far as in the following paragraphs no other regulations to be met. Additionally the following has to be observed:

4.2.5.2.1 Basic principle

During growth the young animals should learn the natural behaviour which they can then conduct in the laying barn, that way avoiding behavioural disorder. During growth robustness should be developed and a natural immunisation should be achieved. The housing system in the growing barn should be equivalent to the barn of the laying hens.

In the course of growing young hens, it is not allowed to kill male chicken or to purchase hatching eggs or day-old chicks of corresponding origin.

For barned young hens, producing BIOLAND eggs, all cocks out of the same hatching or the same number of cocks will be husbanded according to the rules of organic farming.

4.2.5.2.2 Barn

The hens shall be kept in barns or aviary systems with roofed exterior area (veranda).

The individual herds with max. 4.800 animals shall be separated up to a height of min. 80 cm screened-off above the highest point which the animals can reach.

In the prime weeks of life rings for chicken are permissible.

From the 3rd up to the end of the 10th week of life not more than 16 animals per m² moving area at warm area are allowed to be kept.

From the 11th week of life per m² of accessible moving area at warm area a maximum of 13 animals and not more than 21 kg live weight can be kept in the barn.

In barns with multiple levels (permissible max. three levels incl. floor level) a maximum of 24 animals per m² barn floor area can be kept from the 11th week of life.

At least half of the moving area of the barn must be provided as area for scratching purposes. The strewing material has to be at least 5 cm deep and to be kept loose, dry and clean.

Daylight with natural intensity is obligatory. If suitable equipment is installed, the application of a lighting program can limit light exposure and period.

Clean and fresh drinking water is always supplied to all animals. The equipment for feeding shall be constructed in a way that all animals are able to eat at the same time.

From the 1st week of life the animals must be provided with rear possibilities in sufficient length, from the 4th until end of 10th life week min. 10 cm perching rod or 100 cm² elevated seating level per animal, from the 11th week 12 cm of perching rod per animal is required, whereas 1/3 are to be designed as elevated perching rods.

From the 1st week of life the animals must have available a dust bath and strewing material with sand and coarse-grained limestone material as well as opportunities for shelter and cover.

4.2.5.2.3 Veranda and outdoor run

From the 10th week of life latest the animals must have access during their activity period to a paved, roofed veranda (winter garden) for max. 25 animals/m², if the weather conditions are acceptable.

The size of the barn openings between the interior area and the veranda is totalized at least 2 m per 1.000 young hens and at the same time min. 2 m per 100 m² usable area of min. barn area.

The size of the barn openings between the veranda and the outdoor run (green run) is totalized at least 4 m per 100 m² usable area of min. barn area. The passage height is min. 40 cm.

The share of the scratching area at veranda shall be 100 % of the accessible outdoor area.

Mobile barns are not subject to the compulsory veranda, if they have a green run available of min. 2,5 m² per each animal.

Green open air run of 1 m² per animal within a perimeter of 150 m is mandatory. For young hen barns, having at the time of coming-into-force of these standards no green area or not sufficient green area, there is a transitional period until 1st January 2029, subject to approval of inspection body.

Only in case of min. 1 m² access to green outdoor per animal is offered, an isolated exterior area of same size, instead of the veranda, may be taken into account in the calculation of the animal stock density in the barn as laid out in chapter 4.2.5.1.1. It is necessary to keep records on the access to open air.

The conditions as per 4.2.5.1.3 for use and grooming of green area shall also apply.

4.2.5.3 Poultry for fattening

The regulations on the keeping of laying hens apply for the keeping of poultry for fattening respectively. Additionally the following applies:

4.2.5.3.1 Barn

The single barn buildings with a maximum of 4.800 fattening chicken, 5.200 guinea fowls, 4.000 female ducks, 3.200 male ducks or 2.500 geese and turkeys have to be separated completely and physically (feedstuff chain, way out for manure, air conditioning etc.) in such a way that a pressure of infections that may exist and/or contamination with parasites are reduced, and a sustainable management of the green roaming area is achieved. In one building a maximum of 9.600 fattening chicken, 10.400 guinea fowls, 8.000 female ducks or 5.000 geese and turkeys may be kept. The total used area of all fattening poultry barns of one single operation may not exceed 1.600 m².

In the barn, per m² of accessible roaming area, a maximum of 21 kg live weight and not more than 10 animals can be kept. Roaming area is defined as the floor area of the barn available to the animals.

In mobile barns a maximum of 30 kg live weight and not more than 16 animals can be kept per m².

For guinea fowls a minimum of 20 cm perching rod per animal is mandatory. For fattening chicken and poulards minimum 5 cm length of perching rod or 25 cm² elevated seating level, for turkey hens min. 10 cm length of perching road or 100 cm² elevated seating level are necessary, otherwise perching rods in respect to their size and age are to be offered.

4.2.5.3.2 Veranda/exterior barn area

For fattening chicken and turkeys a veranda, a paved, roofed exterior barn area (winter garden) or a paved outdoor run is mandatory in addition to the interior barn area. The size has to be at least one third of the minimum barn area. Exempt from this are mobile barns.

An exterior barn area or paved outdoor run is not required for small stocks, if the number of animals in the warm barn will not exceed 14 kg live weight/m². It is considered to be a small stock in case the number of animals of total 280 hens for fattening (analogue other poultry for fattening, refer to 10.3) at annual average is not exceeded; this rule is valid cumulative with the laying hens.

The exterior climate area can be taken into the calculation of the animal density in the barn as laid out in chapter 4.2.5.1.1.

4.2.5.3.3 Green outdoor run

Green outdoor run is mandatory.

To every animal following minimum area as green outdoor run has to be afforded:

Fattening chicken and guinea fowls	4,0 m²
Ducks	4,5 m²
Turkey hens	10,0 m²
Geese	15,0 m²
Fattening poultry in mobile barns	2,5 m²

The included green area may not exceed a radius of 150 m from the next entry/exit hole of the poultry barn. A radius of up to 350 m from the next entry/exit hole of the barn is permissible for creating regeneration areas at existing barns, however, if there are sufficient shelters protecting against poor weather and predators spaced out evenly over the whole exterior area, which means at least four shelters per hectare.

For geese the outdoor shall be designed the way that the animals can fulfil their need to eat grass.

If the climatic conditions and the physiological conditions of the animals allow for this, access to a green area has always to be afforded, nevertheless if possible at least during one third of the lifetime. Restrictions may result from the physiology by the age and by the feathering of the animals and from the climate.

It is necessary to keep records on the access to open air.

The conditions as per 4.2.5.1.3 for use and grooming of green area shall apply also.

4.2.5.3.4 Mobile keeping of fattening poultry

The general requirements on keeping poultry for fattening are valid, unless expressly stated otherwise here.

The max. floor area for mobile barns for poultry for fattening is 150 m² per barn.

At least three entirely separated locations shall be available and used for a mobile barn. For the reason that the green open air run area can replenish and the nutrient intake coincides with nutrient abstraction the mobile barn for poultry for fattening shall be changed at least after each period of fattening.

4.2.5.3.5 Water surfaces

Water fowl has to be afforded access at any time to running streams, ponds or lakes (only if hygienic conditions and water protection acts permit it) or to a paved water surface that is replaced regularly by fresh water.

4.2.5.4 Small poultry

The standards on laying hens apply for small poultry respectively, unless no other rulings are determined below. Additionally the following has to be observed:

4.2.5.4.1 General requirements on keeping and barn

The minimum pen size with roofed exterior climate area is 7,5 m² for pigeons and 1,5 m² for quails.

All pen areas are to be structured to achieve a behaviour appropriate to the species (e.g. for pigeons possibility to rest on boards, bars, branches etc. of different heights and shapes, for quails possibility for retreat and shelter by means of tubes, caves etc.).

The room height above the accessible space of the individual areas shall be adapted to the respective requirement of the management, however, it shall be at least 200 cm for pigeons and 50 cm for quails. The accessible space can be extended to max. one further level in addition to the usable barn floor area.

4.2.5.4.2 Barn

A barn for keeping quails can offer space for max. 1.500 animals, whereas the max. group size is limited to 300 animals for laying and fattening quails. A barn for pigeons contains max. 1.000 breeding pairs with progeny, the max. group size is 25 breeding pairs with progeny.

The barn (warm area) may be charged with max. 15 animals or 3 kg live weight per m² roaming area.

The barns shall dispose of strewn area for the purpose of scratching (at least 50 % of the barn floor area).

Max. 50 % of the accessible space in the warm area may have a perforated floor corresponding to the age.

150 laying quails shall have 1 m² area for nest at disposal. A single nest has a space of at least 600 cm².

At keeping pigeons, each pair shall have at least one separate nesting site of 0,5 m² area with a strewn brood tray. In order to establish their nest, the pigeons shall be offered building material like straw, spray, leaves, etc.

4.2.5.4.3 Exterior climate area and open air run

The paved, roofed exterior climate area (winter garden) shall be at least 50 % of the accessible space in the warm area and shall be completely provided with loose strewn. The material for strewing shall be selected to avoid foot or toes pad ulcer at the quails. A dust bath shall be offered. Green open air run is recommended.

4.2.5.5 Hatcheries

4.2.5.5.1 General requirements

In a BIOLAND-hatchery only organic eggs shall be hatched, which originate from organic parent animals.

In following cases conventional eggs may be used with the consent of BIOLAND:

- for the brood of thoroughbred poultry, turkey, water fowl and special poultry, if no appropriate organic eggs are available
- in disaster situation and events of plague
- when trying out new parentage without ecological parental level

Only such animals may be culled after hatching if you can recognize that apparent physical abnormalities may not result in animal welfare.

4.2.5.5.2 Requirements on space, technique and hatchery management

At the working areas and brood chambers influence of daylight shall be available.

Only such luminaires may be installed not causing any “stroboscopic effect”.

The brood procedures shall be influenced by a day-and-night rhythm through daylight and, if necessary, by means of artificial lighting in incubators.

Hatching eggs shall only be disinfected before placing; disinfection of the incubator/at ongoing brood is not permissible.

All in all it is necessary to ensure that well-known influences of temperature, light and acoustic signals contribute, according to the state of knowledge and technology, to an optimal procedure of the brood and the hatching.

4.2.5.6 Brother cock husbandry

Brother cocks are the male animals from laying hen lines (*Gallus gallus*), intended for meat production.

They are kept in stationary barns with an affiliate paved, roofed exterior area (veranda), equipped with structural components, and additional green open air run; or in mobile barns with green open air run (regardless of this, standard 4.2.5.3.4 for mobile keeping of poultry for fattening is still valid). Access to paved, roofed exterior area can be granted as soon as the physiological status of the animals allows this.

Feeding and drinking devices shall be offered age-related, meaning clean drinking water and food are available at each time and unrestricted for all animals.

Shrubbery and trees as well as protective equipment ensure a complete and consistent use of the minimum green open air area of each flock. The regeneration of the open air area results from regular periods of non-use and/or rotating open air areas.

Additionally the following minimum requirements are to be observed:

- max. 4.800 brother cocks per each flock (separation of the flocks by means of partition walls, nets or wire mesh)
- max. 9.600 brother cocks per each barn
- max. 1.600 m² total usable area for the poultry fattening in the business
- max. 2 elevated levels in aviaries
- min. 50 % scratching area referring to the usable area of the barn interior
- min. 5 cm dry, loose strewing material in the scratching area
- max. 21 kg live weight per each m² usable barn area (max. 14 animals per each m² from 50th day of live)
- from first week of life dust bath and possibilities to rear
- min. 10 cm length of perch rod or min. 100 cm² raised rest level per each brother cock or combination of both, from 100th day of live min. 12 cm or 120 cm² per each brother cock
- paved, roofed exterior area (veranda) min. 50 % of the usable minimum barn area

- min. 2 m length of barn opening to outer area per each 100 m² usable barn area required for the number of animals in the barn (min. height 40 cm)
- min. 4 m length opening between exterior area, mobile barn respectively and green open air run per each 100 m² usable barn area required for the number of animals in the barn (min. height 40 cm)
- min. 1 m² green open air run per each animal within 120 m
- access to green open air run at min. 1/3 of days of live

4.2.6 Keeping horses

Whenever soil conditions allow, horses have to be afforded grazing or exterior roaming. For them being kept in barns it has to be in the form of boxes or non-penned stables with access to open air roaming area, if possible. As far as possible, the animals are to be kept in groups.

4.2.7 Keeping of fallow-deer and red deer

Fallow-deer and red deer are to be kept all year round in enclosures with access to pasture and with sufficient natural shelters like group of trees, edges of forest or artificial roofed shelters. Red deer shall have possibility to wallow in mud. Each enclosure can be separated at least in minimum two areas for regeneration and maintenance measures.

The continuous available minimum enclosure size for fallow-deer is 1 ha, for red deer 2 ha, in case of more than one kind of bearer of antlers 3 ha.

In the pens there must be hiding places for calves. The pens must provide shelter against climate conditions, preferably by means of natural hedges and trees. Red deer pens must have a slough additionally. In case of lack of food on pasture due to poor weather conditions it is allowed to offer additional feedstuff.

The minimum pack size comprises 5 animals per each fallow-deer and red deer (1 stag, 4 females).

The max. stock density per hectare enclosure area is 15 adult animals per hectare for fallow-deer and 7 adult animals per ha for red deer. Two animals up to an age of 18 months can be considered as one adult animal.

4.2.8 Keeping of rabbits

The following regulations apply for keeping systems of more than three animals for breeding purposes or more than 20 animals for fattening respectively.

4.2.8.1 General

Barn and roaming area allow the animals their kind of behaviour peculiar to the species. Keeping in groups is mandatory. Male rabbits as well as pregnant animals and female animals for breeding may be separated from the group to a limited period for reasons of animal welfare, ensuring still eye contact to other rabbits. In housing, the max. group size is limited to 40 animals for fattening purpose and 5 reproducing ewes as well as up to 3 offspring ewes. If keeping the animals outdoor, this limitation is not applicable providing that space requirements as per 10.6 are observed.

All animals in all husbandry methods have access to materials for gnawing.

4.2.8.2 Barn

Rabbits can be kept in solid and/or mobile barns. The barns shall have sufficiently large, comfortable, clean and dry resting and moving areas of solid, non-perforated construction. The resting area disposes of sufficient dry litter. Litter material shall be strew or other suitable natural material.

The height of the barn must be at least 60 cm ensuring that the animals can stand with raised ears specific to the race.

The area of movement can spread on multiple levels. It ought to contain different surface features.

Possibilities for retreat including dark hiding places and resting areas must be available for all animals in the barn and in outdoor area.

Each doe rabbit needs its own nest to litter. During suckling period, it has to be ensured that the doe rabbits can leave and return to the nest in order to suckle the babies. All pregnant animals shall have access to nests at least one week prior to date of birth and at least as long as they are suckling their hatchlings.

There is possibility to keep different groups of animals in one barn and the common transition from farrows into fattening period.

4.2.8.3 Exterior climate area and pasture

During pasture period rabbits are being kept in mobile barns on pastures or in solid barns with access to pastures. Outside pasture period rabbits can be kept to a limited period in solid barns or in mobile barns with access to open air with vegetation, preferably pasture.

Mobile barns on pastures shall be replaced as often as possible in order to use the pasture at its best. They shall be constructed allowing the rabbits to graze on the pasture.

Exterior areas are to be fenced high and deep enough to prevent escape of the animals by vaulting or digging through.

In addition rabbits shall have access to roofed shelters, including dark hiding places, an elevated stage they can sit on inside or outside, as well as nest material for all sucking females. In case of a paved exterior area a simple access to the vegetation open-air part shall be preferred. In case no simple access can be granted, the paved area may not be included in the calculation of min. outer areas as per Annex 10.6.

The roofed exterior climate area shall offer at least 50 % of the total movement area (sum barn and exterior climate area).

In case of grazing system areas for rotation and resting periods for the vegetation are mandatory. It shall be taken care of the vegetation of the open-air area that the rabbits love to graze on it.

4.3 Handling of animals

4.3.1 General

The handling of animals must take into consideration the needs of the species and the feelings of the animals.

4.3.2 Measures in the business

Care of hair, skin and hooves is to be carried out at regular intervals.

The keeping systems for ruminants shall be arranged in a way that it can be refrained from the removal of horns. Removal of horns is only permissible with official approval. In case of removal of horns, take care of an adequate stunning and pain treatment (in case of goats horns may only be removed at veterinary indication).

Not permissible are:

- Tail docking at beef and pigs. In the case of sheep, tail docking is only allowed for female lambs with acceptance and according to the requirements of BIOLAND and with restraints. It is the aim of the restraints to dispense on the middle-term of tail docking by means of suitable breed. The standard is verified 2023, evaluating also the end of the exemptions.

- prophylactic shortening of pigs' teeth
- insertion of nose rings and nose clamps to prevent pigs from grovelling
- disfigurement of poultry by shortening of the beaks, cropping of wings

Animals must not be subjected to further systematic surgical interference.

The surgical castration of piglets as well as the castration of pigs and ruminants is permitted only under anaesthesia and with pain treatment.

In case of laying hens, each flock shall have, if possible, at least 1 cock per 100 hens from the beginning of the breeding period.

4.3.3 Transport and slaughter

4.3.3.1 General

Stress and unnecessary suffering on the part of the animal is to be avoided in transport and slaughtering. Transport distances should be as short as possible.

4.3.3.2 Transport of the animals for slaughter

It should be given priority to the transport of carcass than transporting animals alive.

From loading to slaughtering all measures should generally be taken to minimize stress, pain and harm and in particular anxiety of the animals. The sense of responsibility of all persons involved is to be encouraged to obtain this and it should be paid attention to that the personnel engaged with the transport and/or slaughtering dispose of the required knowledge on the subject.

The use of electric prods for driving, any instruments for striking or similar instruments for driving as well as of allopathic sedatives prior to and during transport is forbidden.

It must be possible to identify each animal or each group of animals at any singular stage of the transport and the slaughtering process.

The distances between the farms and the slaughterhouses should be kept as short as possible, and it should be given priority to regional slaughterhouses. The transport period must not exceed a max. of 4 hours and the transport distance a max. of 200 km. Only in exceptional cases and subject to prior approval by BIOLAND, a transport period exceeding 4 hours is allowed, provided that sufficient watering during the transport and a longer rest period before slaughtering are guaranteed.

Before loading the animals are to be watered sufficiently.

Pay attention to the time of slaughtering when feeding the animals. It is recommended that pigs should have an empty stomach for a period of not more than 12 hours (which is the time without taking any food). For ruminants the period should not surpass 16 hours.

It is forbidden to treat the animals prior to or during transport with synthetic tranquilizers or synthetic stimulants. Particulars on the individual species are described as follows:

Ruminants:

- the transport plane shall be sprinkled in
- milk-yielding animals are to be milked before loading
- careful loading and unloading
- sexually mature male animals must be transported separately from female animals of the same species

Pigs:

- the transport plane shall be sprinkled in
- careful loading and unloading (e.g. drive shields and fences for guiding)
- if possible driving from darkness to brightness
- separation by fattening groups and origins, in case of common transport use dividing walls

Poultry:

- dark boxes, sufficiently aerated and high enough

4.4 Animal density and purchase of additional feedstuff**4.4.1 General**

The animal density is oriented in the main on the own provision of feed.

With regard to changing climate conditions and in order to prevent shortage of supply in case of extreme weather situations, provisions should be made to avoid the purchase of conventional feedstuffs also in case of such situations. It is desirable to have an annual reserve stock of roughage to the amount of 10 % of the annual requirement. An emergency plan to avoid shortage of feed shall be available. The emergency plan describes possible options in case of shortage of feed, like for example own reserve areas, stock reduction, networking with businesses operating on large areas (arable farms) or possible purchase of feeding stuff from nature conservation areas.

If own fodder is not sufficiently available and thus an additional purchase of feed is required, at least 50 % of the total feed for one animal species, for cattle, buffalo kinds, sheep, goats and horses at least 60 % (with effect 1st January 2024 min. 70 %), must come from the business itself or from a regional cooperation according to BIOLAND requirements. The other part shall originate from other farms of the BIOLAND association, if here not available, in accordance with the requirements of BIOLAND from other organically managed farms, or, if here not available, according to the regulations for the purchase of permissible conventional feed (see 4.5.1 and 10.4).

In case of poultry and pigs the business-own share of feed or the feed being produced in a regional cooperation, can be reduced in small stock sizes to 30 %, if the animal stock in the business is less than 1.000 laying hens (or the respective figure of other poultry categories), less than 30 sows or less than 60 fattening pigs places and simultaneously, the total stock concentration (= animals per hectare) limit as per Annex 10.3 of the operation is not exceeded.

Ready mixed feedstuff shall be purchased only from feedstuff companies certified by BIOLAND, mineral feedstuff only from companies approved by BIOLAND.

Subject to the approval by the authorities, the purchase of conventional feedstuffs in case of disaster situations resulting from extreme weather situations, animal diseases, fire or pollution with toxic substances, can be approved by BIOLAND for individual businesses and for a limited period, if despite preventive measures, generally an obligation for each business, there is the situation of an unpredictable shortage.

The highest permissible number of animals per hectare is limited by the numbers listed in table 10.3. For small businesses with farm size of up to 5 ha LN and animal stock of up to 1.000 laying hens (or the respective figure of other poultry categories), the total stock concentration for poultry as per regulation (EU) 2018/848 is applicable.

4.4.2 Feed from land in conversion

Feed produced on land in conversion (compare 9.2.3) may be used up to a maximum of 25 % in the ration, in relation to the annual average per animal category. If the feed produced from land in conversion is from the business itself, this percentage amounts to 100 %.

Up to 20 % of the feed ration may consist of forage plants from the first year in conversion, however, only from grazing or harvesting of permanent pastures or from areas with perennial forage cultures, or from protein plants which have grown under organic conditions during their whole growing period. These areas shall be part of the business itself and have not been part of an organic production unit of that business in the last five years. When both in-conversion feedingstuffs and feedingstuffs from areas in their first year of conversion are being used, the total combined percentage of such feedingstuffs shall not exceed the maximum percentage for in-conversion feedstuff.

(All percentage calculated on the basis of the dry matter of the feedstuff of agricultural origin.)

4.4.3 Quality of purchased feed

The purchase of fodder is subject to most stringent quality standards in order to minimise the load by pollutions placed on the operational cycle.

Feed, being secondary product from domestic organic food production, may be used with approval by BIOLAND.

Imported feed from EU or third countries may be used with approval by BIOLAND. They can be approved if no domestic organic fodder is available in sufficient quantity. The approval is always limited to a certain period. Within the framework of the approval procedure, the importer has to prove that unintended social and ecological impacts during growth and trade of the feedstuff have been avoided.

4.4.4 Feed additives

In particular the mineral substances and additives necessary for a nutrition in compliance with the needs of the animals as well as harmless, natural feed additives helping to improve the operation's own feed and the animal welfare are permissible.

The use of feed with active substances or additives such as antibiotics, chemobiotics or hormonal performance boosters, coccidiostatica, histomonostatica, copper as performance booster, NPN-compounds, synthetic aminoacids and synthetic colorants is forbidden.

The used vitamins, trace elements and additives must be used from natural origin, as far as they are available in sufficient quantity and quality. If they are not available and need is determined, the individual feed and additives as listed in appendix 10.4.5 may be used in animal nutrition.

4.5 Feeding

4.5.1 General

In principle, the feeding of the animals is done with fodder of organic origin.

Animal feeding is to be designed in such a way, that fodder produced in the operation itself is to be used to achieve animal products of high value. Feeding in accordance with the needs of the species, in addition to the determination of rations according to the animal needs, also involves supplying feed as per animal's behavioural requirement.

In case of non-availability and shortage of supply the temporary regulations for purchased feed from non-organic origin subject to authorisation (see 10.4) are valid.

When the animals are being driven from one pasture to the other during a period of transhumance, the uptake of conventional vegetation will be acceptable (max. up to 10 % of annual ration referred to the dry matter contents of the fodder of agricultural origin). During this period, limited to max. 35 days, organic animals shall be kept separate from other livestock.

4.5.2 Cattle feeding

In cattle feeding above all basic fodder from the business itself must be used. At least 60 % of the dry matter in the daily ration must be roughage.

Cattle at the age of 12 months and more, which are kept in-house and on paved outdoor runs due to missing grazing areas, shall be mainly fed with roughage during vegetation period. To go below this limit is allowed, in case the forage portion has to be restricted or omitted due to weather conditions.

Individual animal groups which are temporarily excluded from the access to pasture (e.g. animals right before calving, animals to be covered) as well as beef cattle at the end of fattening period (max. 3 months and max. 1/5 of animal lifetime) and bulls husbanded on businesses with green fodder by pasturage do not need to be fed with forage in the barn during this period.

The rearing of calves is based on the operation's own milk, preferably mother's milk, or milk from other farms of the BIOLAND association or, if not available there, in accordance with the requirements of BIOLAND from other organically managed farms, for a period of at least 3 months.

Feeding with hot air dried green fodder (cobs) should be waived wherever possible due to the high energy input required. This does not apply for milk producing operations which, for reason of quality, cannot use silage.

4.5.3 Pig feeding

Fattening pigs and breeding pigs are to be offered roughage appropriate to their age.

Suckling period is at least 40 days.

Subject to approval of inspection body, up to 5 % selected non-organic protein feedstuff can be used for piglets up to 35 kg live weight until 31st December 2025, unless the feedstuff in organic quality is not available and if they were processed without chemical solvents. The share refers to the annual requirement of the dry matter contents of the fodder of agricultural origin for this animal category (see Annex 10.4).

4.5.4 Sheep and goat feeding

The basic principles of cattle feeding also apply for sheep and goats, if not otherwise stipulated in the following.

The breeding is achieved with natural milk for a period of at least 45 days, preferably mother's milk.

In case of breeding lambs and kids in milk sheep or milk goat operations as well as in problematic cases (outcast lambs, triplets, etc.) the use of organically produced cow milk or milk powder from organically produced milk is possible.

Sheep and goats above the age of 12 months, apart from billy goats for breeding purpose, which are kept in-house and on paved outdoor runs due to missing grazing areas, shall be mainly fed with forage during vegetation period. To go below this limit is allowed, in case the forage portion has to be restricted or omitted due to weather conditions.

Individual animal groups which are temporarily excluded from the access to pasture husbanded on businesses with forage feeding through meadows do not need to be fed with forage in the barn during this period.

4.5.5 Poultry feeding

At least 10 % of the daily feed ration for laying hens must be given as kernels into the strewing material. Free consumption of mussel shells and grit or similar is to be ensured. The food ration must contain food components requiring little digestion (e.g. grass).

For poultry in the fattening phase the feed must contain at least 65 % grain, protein plants and oilseeds.

Young hens must be able to take an appropriate kernels mixture out of the strewing material from the 7th week of life on latest.

Water fowl (ducks, geese) should, from the 6th week of life on, be given part of their feed in moist form.

Subject to approval of inspection body, up to 5 % selected non-organic protein feedstuff can be used for young poultry until 31st December 2025, unless the feedstuff in organic quality is not available and if they were processed without chemical solvents. The share refers to the annual requirement of the dry matter contents of the fodder of agricultural origin for this animal category (see Annex 10.4).

4.5.6 Horse feeding

If in keeping horses in boarding stables fodder is used or treatment is effected by the horse owner, not being approved, it must be ensured that these are of no danger for the operational cycle of the operation. The manure generated in this way is to be treated as organic manure from external sources.

4.5.7 Rabbit feeding

The places of feeding must be accessible to all animals at all times.

The predominant part of the ration consists of roughage in the form of pasture fodder, hay, green fodder silage, dried grass meal (pellets) etc. Furthermore, ingredients of firm consistency must be contained as fodder for gnawing, e.g. tree branches, boughs, fresh wood or similar.

The min. suckling period is 42 days from birth.

4.6 Animal health

4.6.1 General

The basis for the animal's health and fertility is suitable keeping, feeding and breeding. Preventive measures for maintaining the animal's health without the use of medication, for increasing the animal's own physical defence forces and to contribute towards avoiding illnesses are to be applied wherever possible. Immunological veterinary drugs are allowed for disease prevention. Hygienic measures as there are cleaning and disinfection measures, keeping of resting times in non-paved open air runs and green open air runs and measures of pasture management are to be given priority to therapeutic treatment.

Stables, enclosures, equipment and appliances are to be cleaned and disinfected appropriately, in order to prevent cross-infections and the multiplication of pathogens. Excrement, urine and non-eaten or spilled fodder shall be disposed of as often as possible to limit odour formation and to prevent drawing insects or rodents. In order to eliminate insects and other pests in buildings or other facilities in which animals are being kept, rodenticides (only in traps) can be used as well as all manners permissible to be applied in organic/biologic production (see 10.7).

4.6.2 Treatments

If despite all preventive measures for animal welfare, the animals fall ill or get injured, they shall be treated as urgent as possible. Conventional medication (ethical or on prescription) may be used to prevent unnecessary suffering on the part of the animal and to preserve life. These must be prescribed by the veterinary surgeon.

Single fodder of mineral origin and nutritional additives allowed for in these standards as well as phytotherapeutic and homeopathic products are to be given priority to synthetic chemical allopathic veterinary drugs, including antibiotics – in case their therapeutic effect to the specific kind of animal and disease to be treated is guaranteed.

If one animal or a group of animals gets more than three treatments with chemical-synthetic allopathic medication per year or more than one treatment, if the productive life cycle is shorter than one year, then the animals or the products produced from them can no longer be labelled as organically produced or they have to restart the conversion period, subject to the permission of BIOLAND (compare 9.2.4). Exempted from this are vaccines, parasitic treatment and medication the use of which is determined by official regulations.

In case of using chemical-synthetic allopathic medication, the double period of waiting following their use as legally stated is to be observed, and at least 48 hours have to pass prior to the production of foodstuffs.

The prophylactic use of conventional medication and hormones is generally forbidden. Exempted from this is medication the use of which is determined by official regulations as well as vaccines.

Within a veterinarian therapy hormones may be used for single animals.

The use of synthetic substances that enhance growth or increase production or suppress natural growth are not permitted.

Vaccines may only be used if diseases on that particular business are known to be problematic or it is to be expected that diseases may not be controlled by other management measures. Legally prescribed vaccines are permissible.

The list of active substances and groups of pharmaceuticals the use of which is forbidden or limited must be observed when carrying out treatment (compare 10.5).

4.6.3 Barn register

Detailed records are to be kept in a barn register about all treatment of animals. This will include time of treatment, diagnosis, type and duration of treatment and waiting period for the medication used. The treated animals are to be labelled as such in a doubtless manner, in case of large animal individually, in case of poultry and other small animals individually or in groups.

4.6.4 Storage of medication

Only medication the use of which is approved may be stored in the operation.

The medication is to be stored in a medicine cupboard safeguarded against access by unauthorised persons. A clear labelling of the medication has to be provided.

Residual amounts of medication have to be disposed of appropriately.

4.6.5 Barn hygiene

Environmentally compatible agents are to be used wherever possible in the cleaning and disinfection of barns, milking machines and other barn equipment.

The list of approved substances for cleaning and disinfection has to be observed (annex 10.7).

4.7 Animal breeding

4.7.1 General

Breeding must be planned in such a way, that the performance, the health, the vitality and durability of the animals as well as the quality of the animal products are maintained and improved at different environmental conditions.

Keeping domestic animals common to the region and threatened by extinction should, wherever possible, be promoted.

In breeding animals and in the choice of the type and race of the animals, particular ecological requirements for location must be taken into consideration. In the case of breeding animals for milk production and for breeding purposes, especially the feature of longevity is to be observed. Types of animals and races not being suitable for the above described keeping systems (compare 4.2) must not be kept.

For fattening poultry the following applies: If no as such defined slow-growing races/origins are kept, the following minimum age for slaughter has to be observed:

chicken	81 days
capons	150 days
Peking ducks	49 days
female flying ducks	70 days
male flying ducks	84 days
"Mulard" ducks	92 days
guinea fowls	94 days
male turkeys and roasting geese	140 days
female turkeys	100 days
pigeons and quails	28 days

4.7.2 Origin of breeding animals

The use of animals for breeding originating from embryo transfer should be avoided. The breeding may not be carried out on the basis of animals permanently purchased from non-organic origin.

4.7.3 Reproduction

Reproduction by means of natural copulation is preferable. Artificial insemination can be applied for the purpose of improvement of the breeding ability of the animals. Embryo transfer and cloning are forbidden.

4.8 Purchase of animals

4.8.1 Basic principles

The purchase of animals may only be from other farms of the BIOLAND association or, if not available there, in accordance with the requirements of BIOLAND from other organically managed farms.

Only except from this are animals where it can be proved that their acquisition from such an operation is not possible and where BIOLAND and the responsible inspection body have issued an exemption permit. Exemption permits for the purchase of animals from conventional origin are only applicable in cases regulated under chapter 4.8.2. The conversion periods and the indications for the use of the trade mark as listed in 9.2.4 have to be observed.

When purchasing cattle, sheep, goats, pigs and poultry for fattening from non-BIOLAND organic businesses, the transition periods for using the brand BIOLAND are to be observed (refer to 9.2.4.1).

Any animals purchased with approval from conventional businesses are to be kept separate from the organic husbanded animals until the end of the conversion period (refer to 9.2.4.1), or they shall be clearly identifiable.

4.8.2 Possible permits for purchasing conventional animals

4.8.2.1 Cattle

For the initial generation of a stock, calves for breeding purposes may be purchased after weaning, however, latest up to an age of 6 months.

Young cattle before first calving and male cattle for breeding purposes may be purchased annually to an extent of 10 % of the adult cattle stock. For the purpose of massive expansion of the stock, the switch to another race, the opening of a new operation branch or for breeds threatened by extinction this percentage may be increased to 40 %. The purchase of animals from domestic animal races threatened by extinction for breeding purpose is allowed without any limit to age.

The use of the trade mark BIOLAND is not permitted for cattle that was born on conventional farms and/or raised with feedstuffs non-compliant with these standards.

4.8.2.2 Pigs

For the initial generation of a stock, pigs for breeding purposes may be purchased after weaning, however, latest up to a weight of 35 kg.

Young sows before having piglets for the first time and boars for breeding purposes may be purchased annually to an extent of 10 % of the stock of adult pigs. For the purpose of massive expansion of the stock, the switch to another race, the opening of a new operation branch, or for breeds threatened by extinction this percentage may be increased to 40 %.

The purchase of animals from domestic animal races threatened by extinction for breeding purpose is allowed without any limit to age.

4.8.2.3 Sheep and goats

For an initial stock build-up female lambs and kids for breeding purposes may be purchased right after weaning, however, latest up to an age of 60 days.

Young animals before first lambing as well as billy goats may be purchased annually to an extent of 10 % of the stock of adult animals. For the purpose of massive expansion of the stock, the switch to another race, the opening of a new operation branch, or for breeds threatened by extinction this percentage may be increased to 40 %.

The purchase of animals from domestic animal races threatened by extinction for breeding purpose is allowed without any limit to age.

4.8.2.4 Poultry

Laying hens and young poultry for fattening may be purchased up to the age of less than three days.

Young poultry from the age of 3 days may only be purchased, if they are raised on organically managed farms.

The purchase of animals from domestic animal races threatened by extinction for breeding purpose is allowed without any limit to age (max. 100 laying hens up to the 18th week of life). BIOLAND labelling is only possible for animals being housed before the 3rd day of life.

In the case of poultry for fattening purposes care should be taken to ensure that the choice of the race is suitable for the method of fattening with open air runs.

In case of small poultry breeding animals may be purchased for an initial stock build-up without limitation, otherwise annually to an extent of 10 % of the stock.

4.8.2.5 Fallow-deer and red deer

For the initial generation of a stock animals for breeding purposes may be purchased right after weaning, however, latest up to an age of 6 months. Animals for breeding purposes may be purchased annually to an extent of 10 % of the stock of adult animals.

4.8.2.6 Rabbits

For the initial generation of a stock animals for breeding purposes may be purchased right after weaning, however, latest up to an age of 3 months.

Animals for breeding purposes may be purchased annually to an extent of 10 % of the stock of adult breeding animals. This percentage can be increased to 40 % in the case of massive expansion of the stock, switching to another race or opening a new line of production.

The purchase of animals from domestic animal races threatened by extinction for breeding purpose is allowed without any limit to age.

4.9 Animal labelling

All of the domestic animals kept on the operation premises must be clearly identifiable.

Thus, all animals or groups of animals are to be marked and a register of animals must be kept.

4.10 Bee-keeping

4.10.1 General

The general parts of the BIOLAND standards are also applicable for bee-keeping in as far as there are no exceptions specified in the following.

Bee-keeping can be also carried out according to the BIOLAND standards by operations which do not cultivate any area under agricultural use.

4.10.2 Keeping of the bees

4.10.2.1 Location of the bee colonies

Paragraph 2.2.1 of the standards applies accordingly to the locations of the colonies. If the location of the hives is an agriculturally used field it must be managed organically. The location of the colonies has to be chosen in such a way that within a perimeter of 3 km an impediment worth-mentioning of the bee products by agricultural or non-agricultural sources of pollution is not to be expected. For pollen gaining it is not allowed to use crops of which the flowers were sprayed with pesticides. Also industrial areas or the vicinity to streets having huge volume of traffic (e.g. highways) should be avoided.

If it is suspected that the load on the environment is too great, the bee products are to be examined. If the suspicion proves to be founded, the location is to be abandoned.

Only such numbers of bee colonies are to be placed in one location which allow adequate supplies of pollen, nectar and water for each colony.

If canopies from cultivated plants are intended to be used, organically cultivated areas are to prefer as nectar collecting areas. The planned targeting of conventional intensive fruit cultures for nectar gathering or pollination is not permissible.

The locations of the colonies are to be recorded in a movement plan throughout the year. The movement plan must contain exact details in regard to period of time, location (fields, plots of land, or similar), canopy and number of colonies.

The colonies may only be located, also for hibernation, in designated BIOLAND areas as well as in adjacent regions. Locations outside the area under the care of BIOLAND are to be used only with permit.

If locations of colonies are situated in areas, which are indicated to be unsuitable for organic apiculture by inspection authorities, products from those areas must not be marketed with reference to organic production.

4.10.2.2 Hives

Hives must be constructed of wood, straw or clay. This does not apply to small parts, roofing, grid floors and feeding appliances. In manufacturing the hives pollutant free glues and paints (e.g. natural varnishes on a linseed oil or wood oil basis) are to be used. Varnishes containing biocide or produced in a chemical synthetic process are excluded.

Treatment of the interior of the hive is prohibited unless this is done with beeswax, propolis or plant oils. Cleaning and disinfection is to be by means of heat (flame, hot water) or mechanical. The use of chemical matters is prohibited.

4.10.2.3 Wax and honeycombs

The colonies are to be afforded the possibility of constructing natural honeycombs on several combs during the breeding season.

Central walls, start strips may only be made of beeswax which has been produced in BIOLAND business from natural honeycombs or wax for decapping. Plastic central walls are forbidden.

There may be no residue of chemo-therapeutics which may indicate the non-permissible use of varroa or treatment against wax moth.

Wax may not come into contact with bleaches or solvents or other additives. Only devices and containers of non-oxidizing materials are to be used for the wax processing. For hive hygiene, only thermal processes and bacillus thuringiensis preparations are permissible.

4.10.2.4 Calming and driving away bees

No chemical synthetic materials may be used to calm or drive away the bees. Smoke shall only be used to a limited extent. Means for smoke shall be of natural materials.

4.10.2.5 Feeding bees

The feeding of bees is permissible as long as it is necessary for the healthy development of the colonies. Within the scope of the business possibilities, bees should be fed using honey from the operation's own bee-keeping.

Feeding with sugar is limited to the winter hibernation period and for the creation of young colonies.

Adulteration of the honey as a result of excessive winter feeding is to be avoided by removing this prior to the start of the gathering season. Gaps in feeding with nectar supply are to be filled only by BIOLAND honey.

Feeding with pollen substitutes is not permissible. For the feeding only BIOLAND feedstuffs may be used, if not available, feedstuffs from other organic sources in accordance with the requirements of BIOLAND association.

4.10.2.6 Bee health

The use of chemo-therapeutic medication is forbidden. Only in combating the varroa mites it is permissible to use:

- lactic acid
- formic acid
- oxalic acid
- thymol (as the case also in combination with eucalyptol, camphor and menthol)

in addition to the bio-technical and bio-physical methods.

For bee colonies destined for the production of honey with their honeycombs, the use of these materials is only permitted in the timespan between the last honey harvest of these colonies and 15th January of the following year. Oxidation on metals where residues may be expected is to be avoided.

All treatment measures used are to be recorded in a treatment journal.

4.10.2.7 Apicultural methods

The curtailing of bee wings as well as other mutilations are forbidden.

The larvae with drones may only be removed in order to fight a varroa infection.

4.10.2.8 Bee breeding

The objective of the breeding is the keeping of varroa-tolerant bees in a manner suited to ecological conditions.

Natural breeding and reproduction processes are preferable. The swarm instinct is to be considered in this.

Instrumental insemination may be applied in breeding operations in individual cases if an exception has been approved by BIOLAND.

4.10.2.9 Purchase of bees

The purchase of colonies, offspring, swarms or bee queens is only permitted from other businesses of the BIOLAND association.

Purchase is permissible from other organic businesses according to the demands of the association in case bees, colonies etc. are not available within the expectable season of sales or reproduction inside BIOLAND distribution area. Prerequisite: explicit previous approval by BIOLAND.

The catching of conventional natural swarms is permitted as long as its number does not exceed an annual limit of 10 % of the existing bee stock size in the operation.

This 10 %-regulation applies also to the purchase of bee queens from conventional origin.

4.10.2.10 Marking

All bee colonies are to be numbered consecutively and recorded in a colony register

4.10.3 Honey

4.10.3.1 Harvest

Only honey which has ripened in the hive may be extracted.

Combs destined for the production of honey must not contain any offspring.

The use of chemical repellents as well as the killing of bees during harvesting is forbidden.

All harvesting measures have to be recorded in the colony register in combination with yield figures as exact as possible.

4.10.3.2 Processing

Warming of the honey should be carried out as gently as possible. It may not be heated to more than 40 °C. The melitherm process is permissible.

The honey should be filled wherever possible before it sets for the first time. Returnable sales units are to be preferred.

To preserve the natural contents, the honey must be stored in dry, cool and darkened conditions. To remove impurities such as wax parts, the honey may be passed through a filter (filter mesh not less than 0.2 mm).

Materials coming into contact with honey must be suitable for food. Please pay especially attention to that honey is a food item with a low pH-level.

4.10.3.3 Measurable quality criteria of the honey

In addition to the legal requirements, the following are applicable: water content max. 18 % (heathland honey 21.5 %), HMF content in mg/kg max. 10, invertase units min. 64 U/kg honey (according to Siegenthaler), with exception of honeys having a low enzyme content (very pure acacia and linden honeys).

Honey which does not fulfil the quality criteria in regard to HMF, enzyme or water content may only be marketed under the trade mark BIOLAND as honey for processing in foodstuff. No residue of chemical therapeutic agents may be traced in the honey which would indicate treatment of an impermissible nature.

4.10.3.4 Declaration

All stores and sales containers are to be marked.

We recommend to show the following marking on the honey jars: As a result of the large radius of flight of the bees it cannot be expected that in all cases they will fly over only or mainly organically farmed areas (or in a similar form).

4.10.4 Pollen

4.10.4.1 Pollen trap

The stripping facility should be arranged to avoid any injury to the bees. The pollen collecting basin should be arranged to remain sufficient pollen for the bees own supply.

The pollen within the pollen trap has to be protected against rain, moisture and direct sunlight.

The pollen trap should be arranged to avoid the pollen to get lumpy (piling-up).

For aeration the floor of the collecting basin should be equipped with a fine grid of special steel.

The bottom of the hives are to be cleaned regularly.

The pollen collecting basin must be of material legally permitted for the use with foodstuff and it has to be cleaned regularly upon need (but at least 2 times a week) carefully with boiling water or steam to avoid any mould.

4.10.4.2 Processing

At least once a day the pollen has to be removed and it must not be left within the pollen trap overnight.

The pollen took must be dried immediately or frozen for a later processing.

The drying air must not exceed 40 °C. Degree of drying: The water contents must not exceed 6 %.

The pollen has to be cleaned mechanically. Keep attention to that no foreign parts are in the pollen.

4.10.4.3 Packing and storage

The pollen must be stored cool and dry.

Storage and sales drums should be largely airtight to avoid humidity penetrating the pollen, and they have to protect the pollen against light.

The storage drums are to state the year of harvest and the batch number.

The sales packing has to indicate a batch number as well as the best-before-use date which should be limited to the 31st July of the year following the year of harvest.

4.10.5 Further bee products

The use of the trade mark BIOLAND is possible for beeswax and beeswax products if the beeswax was originally produced from bees from a BIOLAND operation.

In the processing of mead, the processing standards for the production of mead apply.

4.10.6 Conversion

The conversion period starts if the production rules, especially for hives and combs, correspond to the standards. Existing wooden hives with coats of harmless paint are regarded as being in accordance with the standards. During conversion the BIOLAND wax cycle is established.

The use of the BIOLAND trade mark is permissible for bee products from converted colonies, if these have been managed at least for a period of one year in accordance with the standards, the BIOLAND wax cycle is established and all colonies of the business are included in the conversion. Stocks of honey from the period prior to and during the conversion are to be clearly marked.

4.11 Fish farming

4.11.1 General

The general parts of the BIOLAND standards apply also to fish farming in as far as no exceptions are made in the following.

4.11.2 Types of keeping

4.11.2.1 General requirements for keeping fish

The fish may only be placed and reared in natural or almost natural waters such as earth basins and ponds. The use of plastic foils and keeping in nets is prohibited. The free movement of fish living in natural waters should not be hindered by the basin. A diversion ditch is prescribed in case of new constructions or in reconstruction. Adequate measures shall be taken to prevent that new introduced, cultivated species of fish may not escape from the culture. Any losses shall be recorded.

Special regulations apply for propagation (see 4.11.9).

4.11.2.2 Retaining fish

For retention purposes, ponds with the smallest possible organic bed or suitable fish containers should be used. The period which the fish spend in the retention area is to be kept as short as possible.

4.11.3 Water quality

Input water should fulfil the following minimum requirements:

- has no or only minor sewage water load
- has no harmful load from pesticides or fertilisers from farming
- has a sufficient oxygen content

The quality of the water may not deteriorate significantly between input and exit points as a result of being used in fish culture. In order to evaluate water quality, the legally specified water quality classes will be applied. Aeration of the water is only permitted in exceptional circumstances to maintain life and not for the increase of growth.

4.11.4 Fish culture and care

4.11.4.1 Drying out

When removing fish and subsequently drying out the pond, appropriate damming measures must be taken to prevent sludge from being carried into the recipient.

4.11.4.2 Fertilising and lime fertilising

As fertilisers only organic fertilisers according to chapters 10.1.1 and 10.1.2, as well as carbonate of lime and stone powder are permissible. The use of quicklime for fertiliser purposes is prohibited.

4.11.4.3 Encroaching water plants

Encroaching water plants may only be removed by biological or mechanical means (e.g. cloudiness, joint weed). Chemical agents are not permissible. It is not permitted to burn off dams.

4.11.4.4 Biotope unit

The operation is obliged to maintain biotope structures, withdrawal possibilities and shelter for flora and fauna (guideline for total operation is 5 % of the pond area). At least 20 % of the banks is to be left as a 1.5 m wide sedimentation and reed zone.

4.11.5 Fish stock density

The stock of fish is to be oriented on the local conditions and the natural capacity of the pond. The following maximum stock limitations apply:

- carp/ha: 3.000 K1 or 600 K2

The total production per ha and year is max. 1.500 kg fish.

In the case of mixed stock with tench and other non-predacious fish, the values are to be adapted in accordance with the weight of the fish. Stocking with predacious fish is to be in accordance with the natural feed content. Several types of fish are to be included in the stock.

4.11.6 Feeding

The basis for fish feeding is the natural feed content of the pond, by which the major part (more than 50 %) of the total feedstuff need of the production procedure must be covered. The pond's own production is to be used optimally by adding feed of plant origin. Additional feeding is to be carried out exclusively with feed from the operation itself or from other farms of the BIOLAND association or, if not available there, in accordance with the requirements of BIOLAND from other organically managed farms.

4.11.7 Handling fish

Retention, transport, fishing and killing fish are to be carried out in such way that the fish are not subjected to any undue loads or stress. The fish are to be stunned before killing and may not be killed by means of suffocation.

Any facilities for stunning and killing shall be maintained in an effective and duly traceable way.

4.11.8 Health of Fish

Permissible for treatment of fish are immersion baths with sodium chloride, quicklime or potassium permanganate, subject to approval by inspection body. Furthermore, the use of quicklime is permissible in case of immediate danger as treatment for the stock as well as after the occurrence of a disease as a hygienic measure to be spread on the wet floor of the pond after dry fishing or prior to flooding the pond. When prescription medication is used, the waiting period is to be doubled and is at least 48 h, if no waiting period is stipulated, before the fish are put into circulation. Allopathic treatments are limited to two treatments per year, except vaccinations and measures within the scope of compulsory eradication schemes. In case of production cycle of less than one year, however, allopathic treatment is only permissible once a year.

All treatment measures effected are to be recorded in a treatment register.

4.11.9 Fish reproduction and breeding

The objective of breeding fish in fish culture is to have healthy, strong domestic fish suitable for the location and region. The ecological/organic aquaculture is based on breeding a young stock originating from ecological/organic broodstock and ecological/organic production units.

The use of hormones in reproduction is also prohibited.

Artificially polyploid fish shall not be used.

4.11.10 Purchase of fish

In as far as such are available, fry fish must be purchased from other farms of the BIOLAND association or, if not available there, in accordance with the requirements of the BIOLAND association from other organically managed farms. Subject to the approval of the inspection body, fish purchased from conventional operations must have spent at least two thirds of their lives in a BIOLAND operation before they can be sold under the trade mark BIOLAND.

4.11.11 Conversion

Adaptation of the fish culture to comply with the standards is carried out during the conversion period. At the beginning of conversion, the water and the location are to be tested in regard to its suitability. Conversion, as a rule, takes place rapidly within two years, after a maximum of 5 years all production units must be involved in conversion. The trade mark BIOLAND may be used when the total production process (or, respectively, a total production unit) has been converted and the fish shall have been kept at least 2/3 of their lifetime in compliance with the standards. When converting the complete operation with all production branches in one step, it is allowed to use the trade mark BIOLAND after a period of 24 months for all fishes available on the operation at the time of starting conversion.

At the same time the following conversion periods are applicable being minimum requirement for using the trade mark on aqua culture production units including the existing aqua culture animals, depending on the type of the culture:

- for cultures, which cannot be drained, cleaned and disinfected, conversion period is 24 months
- for cultures, which were drained or kept a resting period, conversion period is 12 months
- for cultures, which were drained, cleaned and disinfected, conversion period is six months
- for cultures in open water conversion period is three months

5 Horticulture and Permanent Crops

The general parts of these standards apply also to horticulture and permanent crops in as far as no exceptions are specified in the following.

In farming without animals the supply of nitrogen must be effected as far as possible by leguminous growing in the operation itself. The amounts of nitrogen fertiliser which is additionally required and permissible may be purchased in the form of external, organic additional fertilizers.

5.1 Vegetable production

5.1.1 Fertilizing

The total amount of fertilizer from the operation and organic supplemental fertilizer to be used in free range vegetable gardening may not exceed 110 kg of nitrogen per ha and year. In greenhouses, the quantity of the nitrogen fertilization shall be matched to the length of the growing period and the yield expectations.

In free range vegetable gardening, at annual average for a total period of 12 weeks, 20 % of the arable area has to be cultivated with green manure during growing season. The assessment period for accounting the green manure areas is 2 years.

In greenhouses, maintaining and growing of fertility and the biological soil activity by use of short-term green manuring plants and legumes, as well as using the plant variety.

In general, in vegetable gardening, item 3.4.5 is of particular importance. In order to control the nitrogen dynamics in the soil it is urgently recommended that Nmin-tests shall be carried out on a regular basis.

5.1.2 Growing in soils and plant pots

Vegetable shall be grown in natural soil (see 3.1). Growing on stone wool, hydroponics, nutritional film technology, thin layer culture and similar systems are not permissible neither the production in bags and containers. Permissible is the growing of herbs in pots, whereas the container is sold together with the plant.

The production of chicory sprouts by immersion in clear water is possible.

The use of peat to enrich the soil with organic substance is not permitted. It is also forbidden to use styrol mull and other synthetic materials in soils and substrates.

5.1.3 Steaming areas and soils

Soil and substrates may be steamed. In greenhouses, flat steaming of the soil up to 10 cm depth for the purpose of weed regulation is permissible.

5.1.4 Production in glass and foil greenhouses

5.1.4.1 Heating of glass and foil greenhouses

Heating greenhouses is possibly limited to keep the culture areas free from frost (approx. 5 °C) in winter (November, December, January and February).

If it is despite necessary to heat above a temperature of 5 °C, take care of following climate protection measures:

- Greenhouses shall have a double shell (for example duplex foils, bubble foil, double web sheets) or an energy shielding. Alternatively a high-quality isolation can be used leading to a heat transition coefficient (U-value) of below 2,1 W/m²K for the building.
- With effect 2030 heating shall be effected to at least 80 %, and as at 2040 to 100 %, with renewable energy sources according to BIOLAND requirements.

As at 2040 this is generally valid for heating glass and foil greenhouses.
The temporary heating in emergency cases is excluded from these restrictions.

5.1.4.2 Illumination in glass and foil greenhouses

Assimilation lighting is not permissible. Except are young plants as well as one-year cultivated herbs and ornamental plants. Purchased power shall come from renewable sources.

5.1.4.3 Treatment with gas and CO₂-fertilizing in glass and foil greenhouses

Treatment with technical or bottled ethylene is not permissible.

With effect 1st January 2026, CO₂-fertilizing is only permissible with gas from biogenic sources or business-own exhaust gas.

5.1.5 Use of technical mulch materials

A maximum of 5 % of the free range area used for growing vegetables may be covered at any one time by mulch foil, mulch fleece or mulch paper. Operations with less than 4 ha of area for vegetables may mulch up to 2.000 m² with the stated materials.

5.1.6 Harvesting and preparation

When choosing the harvesting method and the date of harvesting as well as the preparation of the harvested products, the basic objective should be the achievement and the maintenance of an optimum quality for human nutrition.

5.2 Herb cultivation in natural ground

5.2.1 Preliminary remark

Medicinal and aromatic plants as a special group of cultures place higher demands on growing and processing. Their use, particularly in naturopathy, phytomedicine and cosmetics, necessitates detailed special knowledge in order to achieve the desired effectiveness of the raw materials.

5.2.2 Advice on production

In order to get the desired substances, choice of location, fertilizing, crop rotation and preparation should be adapted to comply as optimal as possible with the differing requirements of the individual species. The operation should therefore obtain advice prior to entering into the field of growing medical and aromatic plants.

5.2.3 Selection of location

As a result of the special significance of medicinal plants, the location is especially relevant (see 2.2.1). The minimum distance to roads should be 50 m and to field paths 5 m, if no suitable protective planting is available.

5.2.4 Fertilizing

In the year of harvesting, it is not permitted to fertilize the cultures with liquid manure. Fresh manure may only be applied until the beginning of vegetation.

5.2.5 Preparation

In preparation the maintenance of a high quality is the prime principle. The devices used in processing must be designed in such way that the goods harvested are handled as gently as possible and no damaging substances (e.g. lubricants) can come into contact with the harvested goods.

5.2.6 Drying

The harvest for drug production must be taken into the drying plant immediately after processing. Materials detrimental to health such as PVC and treated chipboard may not be used. Galvanized steel parts shall be avoided. The drying room shall form a closed unit.

Direct heating with oil or wood or the extraction of moisture by means of chemical additives is forbidden. When drying, the temperature may not exceed the critical point at which a reduction in quality occurs. The drug must be dried to such an extent that its useful life is guaranteed (best figure is eight percent). Different types of plants may not be dried together with one another when they may have a negative effect on each other.

5.2.7 Further processing and packing

The main priority in further processing is the protection of the ingredients. Do not mince or pulverise too much for this reason.

Further processing and packing of the drug should be effected as soon as possible after drying. Prior to packing, the drug should be cooled to room temperature.

The packing material may not transfer any harmful materials to the drugs and must protect them from the effects of light (see 7.5).

5.2.8 Storage

The storage room must be protected against light, dry and as cool as possible. A weekly inspection of the goods in storage is mandatory to check for moisture, possible damage due to fungus or pests. Drugs of different types packed in permeable materials may not be stored on top of one another.

5.3 Shoots and sprouts

In the production of shoots and sprouts the seeds used must originate from BIOLAND propagation. If these are not available in sufficient quantities and qualities, then materials may be purchased in accordance with the requirements of BIOLAND from other organically managed farms. Conventional sources are not permissible.

The water used for the production of shoots and sprouts must be of drinking water quality. Only inert substrate components as per Annex 10.1 may be used as carrier material.

5.4 Mushroom production**5.4.1 Basic principles**

Apart from harvesting the mushrooms, all other important procedures of mushroom growing (preparation of the substrate, inoculation, intermix growth phase) must take place in the operation itself or in other operations of the BIOLAND association or, if not available there, in accordance with the requirements of BIOLAND in other organically managed farms. Substrates of other organic origin (intermixed or not) require the permission of BIOLAND.

5.4.2 Substrate

The basic organic materials, substrate components and additives of the substrate (straw, cereal, bran, etc. as well as manure and compost) must originate from farms of the BIOLAND association or, if not available there, in accordance with the requirements of BIOLAND from other organically managed farms. Only those sources of organic manure are allowed where it is guaranteed that only organic materials were used for the bedding of the animals. If wood is not available from organic operations in sufficient quantities, other sources are possible after careful testing. In order to obtain material which contains as few pollutants as possible, it must

be feasible to follow the origin of the wood in the selection of tree trunks, chips and sawdust, if necessary, their harmlessness should be proved by means of analysis.

Non-organic substrate components must comply with section 10.1.4.

The use of peat as covering soil for growing champignon is permissible.

5.4.3 Disinfection and plant protection

Apart from composting only thermal processes are permissible for disinfecting the substrate. Appliances can be sanitised by means of alcohol or acetic acid.

The major objective in maintaining the health of the cultures is preventive plant control (hygiene, climatic conditions, mechanical protection against pests, etc.). The use of pyrethrum agents in mushroom production is not permissible.

5.4.4 Mushroom brood

Attempts should be taken to obtain organic mushroom brood from other BIOLAND farms or, if not available there, in accordance with the requirements of BIOLAND from other organically managed farms. In case of the operation's own production of brood, the cereal used must originate from other operations of the BIOLAND association or, if not available there, in accordance with the requirements of BIOLAND from other organically managed farms.

5.4.5 Energy use

By selecting suitable culture rooms, the energy used in the production of cultures must be kept as low as possible.

5.5 Fruit growing

5.5.1 Basic principles

Fruit growing, as an intensive permanent culture, places special demands on the design of the total operation. Prerequisites for successful, organic-biological fruit production are:

- the selection of suitable varieties, (under) stock and forms of training
- the generation and maintenance of an ecological balance between pests and beneficial animals
- creation of a favourable microclimate in the fruit plantation
- the use of measures which strengthen the health of the plants and prevent illnesses and pests

Fruit shall be grown in natural soil. Seedlings and saplings may be cultivated in containers for subsequent replanting.

5.5.2 Soil care, greening and fertilising

Orchard areas with tree fruits and cane fruits have to be vegetated all over the year. Use site-specific, species-rich mixture for sowing with grass seed, also natural vegetation is possible.

Greening is to be regulated by mechanical means or grazing in order to preserve biodiversity and to attract beneficial animals by blossoming flowers. Plant strips can be arranged in an open way. In greenhouses, maintaining and growing of fertility and the biological soil activity is effected by use of short-term green manuring plants and legumes, as well as using the plant variety.

The total quantity of nitrogenous fertiliser used (see 10.1) may not exceed 90 kg N per ha of fruit plantation and year. In operations without animals, this amount may be purchased.

5.5.3 Supporting material

Tropical or sub-tropical woods may not be used as supporting material. The tropical grasses, bamboo and Tonkin, are permissible.

5.5.4 Pollination

If bee colonies are being established for the pollination of orchards, BIOLAND bee-keeping businesses shall be preferred.

5.6 Viticulture**5.6.1 Soil care, greening and fertilizing**

In order to reduce the problems and disadvantages of the mono-culture vineyards and to ensure the production of grapes, juice and wine of a high quality in the process of extensive growing, the yield giving vineyard must be greened throughout the year. Greening is to be regulated by mechanical means in such a way that a mixture of various plant species is maintained and beneficial animals are attracted by the blossoming flowers.

For special soil care measures, in dry periods in summer and in care of young plantations, the greening can be turned over in part. If the soil is kept open for more than three months, a soil covering of organic material must be applied. Re-sowing must be with a well-mixed variety among which there must be a considerable part of leguminous plants. The nitrogen balance should be considered when doing this. In case of vineyards on steep slopes with skeleton rich soil, all measures should be carried out according to the local conditions.

Changes in the annual, complete surface greening are to be recorded on the inspection sheet.

In wine growing, the nitrogen fertilizing should not exceed a total volume of 150 kg N/ha in a three-year cycle whereby the fertilizer available for the plants may not exceed 70 kg N/ha in one year.

5.6.2 Supporting material

Tropical or sub-tropical woods may not be used as supporting material.

5.6.3 Plant protection

In the sense of preventive plant care all measures adopted in vineyard cultures are to be effected in such a way that the resistance of the vine is increased, the amount of damage by infectious agents reduced and useful organisms supported. It is, therefore, essential to select vine varieties, vine cultivation and stock formation, foliage work, vine nutrition and soil care suitable for the location. For direct plant protection and to self-regulate the ecological system of the vineyard and the vine's own resistance, agents can be adopted in accordance with Annex 10.2.

In the case of plant protection measures from the air extending beyond the operation itself, the whole of the operation is nevertheless subject to the standards described here. It is to be agreed in writing with BIOLAND which plots of land can be regarded as being free of pesticides and drift from helicopter spraying. Extent, form and location are to be taken into consideration. Grapes from these lands as well as the products prepared from them like wine and juice must not be sold under the trade mark BIOLAND.

5.7 Hop cultivation

5.7.1 Location and area

When the location necessitates this, protective plantings must be created latest within five years after conversion (when directly adjacent to conventional areas) or, respectively, ecological compensation areas (in cleared areas).

New hop cultivation must be a border field or a separate area.

In order to prevent the entering of conventional plant protection agents, the distance to conventional hop cultivation areas must be at least 10 m. If this is not possible, the outer rows must be plucked separately and marketed conventionally.

5.7.2 Supporting material

Wood as support material for new hop cultivation units must be from regional tree species. Impregnation may only be carried out with agents which exhibit highly environmental compatibility.

5.7.3 Greening

Greening of hop cultivation areas throughout the whole of the year is to be effected using mixtures of grasses, herbs and leguminous plants of appropriate species. In order to prevent nutrients being washed out, greening is mandatory, at least from the time of harvesting until spring.

5.7.4 Fertilizing

The nutritional supply of the hops must be mainly in the form of fertilizers generated by the operation itself and a balanced green fertilizing is to be effected. The total amount of the fertilizer from the operation itself and external organic complementary fertilizers used (compare 10.1) may not exceed 70 kg of nitrogen per ha and year.

5.7.5 Preparation

The use of sulphur for conservation is prohibited in drying and processing.

5.7.6 Records

The operator agrees to keep a record in which all fertilizing, plant protection and green fertilizing measures are noted documenting the amounts used and the date for each hop cultivation area. The hop cultivation involved must be noted on the weighing slip with official sealing.

5.8 Ornamental plants, herbaceous perennials and woody plants

5.8.1 Fertilizing and soil care

The use of nitrogenous fertilizers on free range culture areas in which tree nursery cultures are cultivated is limited to 90 kg N/ha and year, otherwise limited to 110 kg N/ha and year. It is urgently recommended that mineral nitrogen content (N_{min}-method) checks are carried out annually to control the nitrogenous dynamics of the soil.

For areas which will probably remain uncultivated for more than 12 weeks during the vegetation period and, as far as possible, also throughout the winter, green fertilizing is to be carried out.

In greenhouses, maintaining and growing of fertility and the biological soil activity is effected by use of short-term green manuring plants and legumes, as well as using the plant variety.

5.8.2 Surface sealing

Sealing free range storage areas for pots and containers is only permissible for the purpose of reusing water.

5.8.3 Plant health and regulation of weeds

In operations operating as ornamental plant, herbaceous plant and tree nurseries measures for preventive plant protection are of central importance. This includes, among others, the choice of suitable resistant types, the selection of healthy seeds and plants, optimum culture processing with appropriate plant density, adapted crop rotation, fertilizing and management of humus. Measures must be taken in the operation to foster the self-regulatory powers of the ecological system (see 3.6).

The regulation of weeds is effected in accordance with 3.8. In greenhouses, flat steaming is permissible to a depth of max. 10 cm.

5.8.4 Seedlings

If no organically reared seedlings are available (see 3.5) recourse can be made to conventional sources following approval being issued by BIOLAND. These conventional seedlings must pass through conversion in special areas. Should they be sold prior to completion of conversion, they may not be designated as being organic. Use of the trade mark BIOLAND is prohibited in such cases.

5.8.5 Purchase and trade goods

If conventionally finished products are purchased this must be clearly recognisable in the operation at all times (purchase, insertion, further culture, etc.). This is to be ensured by means of suitable measures (e.g. labelling, separate beds or patches).

In relation to turnover of the plant products sold, the majority must originate from organic production.

5.8.6 Soils and substrates

Growing shall take place in natural soil (see 3.1). Permissible is the growing of herbs and ornamental plants in pots (pots, containers), whereas the container is sold together with the plant. Seedlings and saplings may be cultivated in containers for subsequent replanting.

Wherever possible, peat should not be used. The peat content of substrates may not exceed a maximum of 50 vol.-% in case of tree, herbaceous and ornamental plant cultures and 70 vol.-% in case of seedlings. In case of plants which require a low pH value for their growth, this ruling can be deviated from.

Purchased composts, peat substitutes and additives must be examined in regard to their environmental compatibility and, in particular, to their pollutant content.

Synthetic additives (e.g. styrol mull, hygro mull) and stone wool are not permissible.

Soils and substrates may be steamed.

5.8.7 Containers for cultures

Attempts should be made wherever possible to use containers of decomposable materials (e.g. recycled paper, wood fibres, flax, jute, hemp) or earthenware containers. Pots and bowls of plastic must be of a stable material feasible to be reused and recyclable. Containers made of PVC are not permitted. Available pots which do not meet these criteria may be used up during the conversion period.

6 Storage

BIOLAND products must be stored in such way that the quality is not negatively affected by storage.

The treatment of the harvested products with chemical storage protection agents (insecticides, fungicides or similar) and storage in containers made of materials with substances which may be detrimental to health, washing stored fruits with chemical cleaning agents, further ripening with chemical substances, the use of germination prevention agents and radioactive irradiation are forbidden. Cleaning of the storage facilities is to be effected using measures which exclude placing environmental loads on the goods stored.

7 Processing

7.1 Objectives of processing standards

Processors of BIOLAND products continue the efforts of organic agriculture to maintain the natural living conditions for plants, animals and human beings on a long-term basis. BIOLAND products produced in accordance with these standards are characterised by their high quality in taste and their high values in health, ecology and culture. The processing standards, in the sense of high nutrition, are designed to ensure wholefood, physiological and ecological quality standard of the final products while taking social tolerance of trade and processing steps into consideration. A further objective of these standards is the creation of the greatest possible degree of transparency, in particular for the consumer.

7.2 Scope of validity of the processing standards

All BIOLAND processors, production operations with their own farm processing and commissioned operations are obligated to comply with these standards.

Processors in the sense of these standards are natural persons and legal entities who/which, by means of cleaning, treating or processing or filling BIOLAND products, achieve an added value and who/which have concluded a contract with BIOLAND for the use of the trade mark.

In addition to the general processing standards, the product-specific standards which are regulated either in the contract or in the branch standards also apply (see 10.9).

The appropriate branch standards contain, in particular, regulations concerning scope of validity, additives and processing aids, processing methods, packing, hygiene, declarations and quality assurance.

7.3 Ingredients and processing aids

7.3.1 Ingredients from agricultural production

Basically, only ingredients from BIOLAND production are permissible for BIOLAND products being processed. They are to be acquired from producers and processing operations which are connected to BIOLAND by means of a producer or processing contract, respectively.

The use of foreign ingredients from organic production in BIOLAND processed goods is possible in founded exceptional cases to a limited extend, if these ingredients:

- are not produced in BIOLAND producing or processing operations
- are evidently not produced in sufficient quantity and/or quality available from BIOLAND producing and processing operations

Prior to the use of such foreign ingredients from organic production, the processor has to file a formal application to BIOLAND for special approval, except BIOLAND has issued a general approval for special goods or group of goods (e.g. seed, spices, exotic fruits) and has informed processors about this. A special approval is always limited in time.

Prerequisite for the use of foreign ingredients from organic production is that these ingredients are recognised by BIOLAND. In the approval of foreign ingredients BIOLAND observes the following priority:

1. ingredients or goods from operations being produced under the observance of the BIOLAND standards, to be acknowledged by an inspection, corresponding to an inspection at a full member
2. ingredients or goods from operations that manage at least according to EU organic regulation (regulation (EU) 2018/848 and implementing regulation (EU) 2021/1165)

In principle the use of ingredients from conventional production is not permissible. If it is proven that certain ingredients from organic production are not available, conventional ingredients may be used in exceptional cases to a part of a maximum of 5 % as far as these are listed in the implementing regulation (EU) 2021/1165 Annex V, Part B. A BIOLAND product may not contain an ingredient of organic origin and at the same time the similar conventionally produced ingredient.

7.3.2 Further additives and processing aids

Only additives and processing aids which cause no damage to health may be used. Water and salt may be used as ingredients in the production of BIOLAND products and are not included in the percentage calculations of organic ingredients.

Applied water shall have at least drinking water quality. For salt only table salt (sea salt, preferably halite), also iodized, shall be used. Using iodized table salt has to be identified clearly. Calcium carbonate (E 170) and magnesium carbonate (E 504) are allowed for anti-caking agent. Any additives and processing aids permissible for the production of BIOLAND products are itemised as positive listings in the product-specific BIOLAND processing standards. If there are no regulations for certain products, Annex V section A of the implementing regulation (EU) No. 2021/1165 is authoritative.

BIOLAND products may not be enriched with minerals (including trace elements), vitamins, amino acids or similar isolated substances, except the use in food is legally prescribed and approved by BIOLAND.

7.3.3 Prohibition to use anthropogenic nanomaterials

We are not being quite familiar so far with the effects of anthropogenic nanomaterials to the environment and human beings. No ingredients or substances shall be used containing anthropogenic nanomaterials or comprising of such.

Definition:

BIOLAND defines nanotechnology as follows:

These are technologies which enable the manipulation, the research or the utilization of very small structures or systems (1–300 nanometre in one dimension). They are characterized in creating new properties due to their small size and their modified surface-volume-ratio. However, their small size also easier allow them to react with other materials and to infringe on organisms. Difference has to be made between naturally occurring nanomaterials and anthropogenic nanomaterials generated purposefully. A border has to be established between anthropogenic nanomaterials and nanomaterials naturally occurring in the environment (e.g. volcanic ashes), nanomaterials naturally occurring in groceries (e.g. monosaccharide, amino and fatty acids) and nanoparticles which are formed unintentionally (e.g. in flour or homogenized milk).

7.4 Processing

Processes are to be used in the treatment and processing of raw materials which – in accordance with the latest status of scientific knowledge – maintain the ingredients of the foodstuffs in an optimum manner and in the sense of wholefood nutrition. This has to be ensured by applying processing methods and techniques the basis of which are of biological, physical and mechanical nature. Extraction shall only take place with water, ethanol, plant oil, carbon dioxide and nitrogen, the quality of which is adequate to the purpose of use. The processes must ensure the most economical use of resources such as water, air and energy sources.

The appropriate branch standards contain recommendations for processing methods and devices.

The processor has to take all required measures to ensure:

- the identification of BIOLAND products or parts by clear labelling of the product itself as well as of packing, cases, means of transport, shipping documents etc.
- to prevent co-mingling, contamination or confusion of BIOLAND products with non-BIOLAND products
- to prevent the contamination of BIOLAND products by pollutants and residual matters, including impurity by cleaning and decontamination; if necessary, the production rooms and facilities are to be purified and disinfected thoroughly

The processor has to take care that these measures securing the quality are executed also in the previous processing stage, including the subcontracted work. Especially all operations processing, storing or transporting also conventional products apart from BIOLAND products have to carefully and completely purify the means of transport, storage rooms and receptacles (silos), facilities, equipment or appliances before taking any BIOLAND products.

Direct or indirect contact of non-permissible substances (e.g. pesticides) with BIOLAND products while doing pest control measures has to be avoided at all times. In case any non-permissible substances or methods have been applied directly on foodstuff or stocks, the products in concern may not be marketed as BIOLAND products. The processor has to take all necessary safety measures to avoid a contamination, including the removal of BIOLAND products from the store or the processing facility. The application of non-permissible substances on facilities or appliances may not contaminate the BIOLAND products produced therein or therewith. In case of doubt the processor has to analyse such products on possible residue loads. The measures for pest control authorised in the BIOLAND contractual operations are listed in the BIOLAND standards for pest control in storage rooms and operational premises.

The hygiene standards, both basic requirements and operational requirements, have to match legal regulations.

7.5 Packing materials

The choice of packing materials is made in accordance with the following criteria:

- Packaging materials must be physiologically unharmed, especially with respect to the migration of health-hazardous substances into the food, and as environmentally friendly in production as possible.
- No packing materials as well as storage rooms, silos or other storage tanks may be used which contain synthetic fungicides, food preservatives or vermin destruction agents. BIOLAND products may not be packed in used bags or cases which came into contact with substances possibly influencing the intactness of BIOLAND products or their ingredients.
- The packaging volume must be reduced to the minimum amount technically required. Hereby, ecological requirements are to take priority over marketing technical and costing aspects.
- The packing materials should be recyclable within the scope of refuse reprocessing.
- Plastics which are difficult to decompose (for example, such as PVC) or, respectively, plastics which are manufactured in a manner which causes an irresponsible load to be placed on the environment may not be used.
- Aluminium foils or foils with aluminium content or combined packaging may only be used following explicit approval by BIOLAND. The processor is obligated to find alternative forms of packing.
- Non-returnable packing may not be used if returnable packaging is possible and feasible.

The appropriate branch standards contain recommendations/positive listings for packaging materials.

We are not being quite familiar so far with the effects of anthropogenic nanomaterials to the environment and human beings. For this reason, also packing material for BIOLAND products shall not be manufactured with anthropogenic nanomaterials. Possible nano-coatings may have direct contact with food by no means.

7.6 Labelling and declaration of processed BIOLAND products

When designing the packaging, the “demands for using the trade mark” as currently amended must be complied with in order to present the consumer with an easily recognisable BIOLAND total assortment.

Labelling and declaration must be in accordance with the requirements of the German Foodstuffs, Consumer Goods and Feedstuff Act (LFGB Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch) as well with the Food Information Regulation (LMIV Lebensmittelinformations-Verordnung). Ingredients of BIOLAND products are to be declared fully and – in case of multi ingredient products – listed in the sequence of their weight percentage. The integral parts of compound ingredients have to be entirely listed. Herbs and spices may be listed within a collective expression, if their percentage is less than 2 % of the total weight of the product. It has to be stated clearly which ingredients are from organic origin and which are not. If additives are used they always have to be listed with their product name or their original name. A class or group designation of the additives (e.g. thickening agent or emulsifying agent) is not permissible. The use of iodized table salt shall be declared in particular.

7.7 Storage and transport

General conditions in regard to this are to be found in section 6 of the BIOLAND standards. Organic products have to be stored and transported in a way that keeps the quality impairment, the pollution and environmental burden as low as possible. The transport distances shall be kept as short as feasible. BIOLAND- and non-BIOLAND-products may not be stored or transported together except the BIOLAND-products are clearly labelled and separated physically. Distinctive labelling at storing and transport is required in particular for businesses, which also store, process and transport conventional products apart from organic goods.

The processing business has to make sure that transport containers are suitable for transporting foodstuff.

A control system for storage conditions including controlled atmosphere, temperature control, drying and moisture control is allowed. Further details are specified in the branch standards.

7.8 Transparency and product identification

7.8.1 Retention samples

The processor is obligated to draw a sample from each batch of raw materials delivered, to mark these with the date of delivery and the name of the supplier. In addition, samples from the finished resp. half-finished products must be drawn. These samples are to be marked with the date of manufacture and the charge number, if applicable. These retention samples are to be kept until expiry of the “best before” date of the processed goods resp., in case the indication of a “best before” date is not necessary, for an appropriate period.

Exceptions can be made for certain products or processing areas (e.g. in the case of easily perishable raw materials) in the appropriate branch standards or in individual cases if the aforementioned obligation to draw and keep samples is not economically justifiable or practically feasible.

7.8.2 Raw material identification

Each processor is obligated to ensure by means of suitable measures within the scope of the quality control procedures of the operation that the BIOLAND raw materials supplier can be identified at all times.

7.9 Execution and inspection

7.9.1 Responsibility at BIOLAND

The basic concepts and the major contents of the general processing standards and the branch-specific standards are passed by resolution at the BIOLAND Federal Assembly of Delegates. The BIOLAND quality assurance is responsible for the processing standards which comprise the continuous development and verification of the branch-specific processing standards. Representatives of the contractual processing businesses participate in an advisory capacity for the standards development. It is also the task of the BIOLAND quality assurance to reach decisions on alterations and extensions of these standards and to make recommendations in regard to them. The Executive Committee (Praesidium) can then reach a decision on the alterations to the standards unless the objectives and the contents of the standards are affected to such an extent that the Federal Assembly of Delegates is required to reach a resolution in regard to this.

7.9.2 Alterations to products being processed

Each processor is obligated to inform BIOLAND in a timely manner of any major alteration in the processing, the additives, the packing or the design of his products within the scope of the processing or, respectively, the design standards.

New products or planned alterations to existing products being processed which cannot be brought into line immediately with the requirements of the general and branch-specific processing standards must be approved by BIOLAND. An application is to be submitted to the BIOLAND quality assurance which will discuss and reach a decision on the application. If required, the processor will supply information on all of the ingredients of the product and the methods of processing.

Should differences of opinion arise, an attempt will be undertaken with the processor to reach an acceptable solution on the basis of the processing standards. If this is not possible, the Executive Committee (Praesidium) will decide on the way of action.

7.9.3 Inspection

Each processor is regularly inspected in regard to compliance with general and branch-specific processing standards. The processor is obligated to place the necessary documents and records at the disposal of the person or inspection body authorised by BIOLAND to carry out the inspection.

The latter are bound to maintain secrecy in respect to third parties. In case of a founded suspicion, BIOLAND is entitled to inspect the operation during normal working hours without giving prior notice.

The processor will place the inspection results according to regulations (EU) 2018/848 and implementing regulation (EU) 2021/1165 at the disposal of BIOLAND, so that the BIOLAND inspections can be based on them.

The production of BIOLAND products at order or labour work by other operations (subcontractors) is subject to the prior notification to BIOLAND. The supplier has to provide a declaration (according to the BIOLAND specimen contract) in which he commits himself to observe the BIOLAND standards and to grant BIOLAND corresponding authority for inspection. The BIOLAND contractual operation is responsible that the order production of BIOLAND products is executed according to the BIOLAND standards, in particular with regard to the origin

and quality of the used raw material and ingredients, and ensures that the produced BIOLAND products are not being marketed by the supplier itself using the BIOLAND tradename.

7.10 Contamination test

As a result of the general loads be placed on the environment or other possible sources pollutants can also find their way into BIOLAND products. The processors are therefore obligated to carefully analyse and determine the weakest points resp. risky areas for potential pollutants to the products. Based on this, a programme according to the HACCP concept for systematic pollution test of BIOLAND products has to be established. The pollution analyses must be executed through acknowledged testing laboratories based on latest techniques with regard to sample taking, test extent, analysis programme and analysis method. The results of the pollution analyses are to be recorded and made available upon request to BIOLAND as well as the responsible inspection body. Please observe the obligation to inform and to register as per chapter 7.11.

7.11 Obligation to inform and to register

The processor is obligated, over and above the legal obligation to inform according to the German Foodstuffs, Consumer Goods and Feedstuff Act (LFGB), to immediately inform BIOLAND in case of any assumption or doubt that raw materials, ingredients or BIOLAND products being processed do not correspond to the regulations serving for the protection of human health, or if they cannot be put into circulation for any other reason.

The exact regulations for the individual products are laid down in the specific processing standards.

8 Marketing

8.1 Basic principles

Marketing is carried out in close co-operation with BIOLAND in order to ensure that the quantitative and qualitative requirements of the market are considered. The products are to be brought to the consumer by the most direct means possible. Marketing must be so transparent that the consumer can follow the path of the product from the producer through to the consumer. Only marketing activities (in particular in regard to advertising/sales promotion, the choice of distribution method, price and product design) may be adopted which do not contradict the objectives and measures of BIOLAND.

The observance of the high BIOLAND standards for sustainability in the fields of biodiversity, animal health, recycling management, and climate and environment protection at manufacturing BIOLAND products has to be guaranteed on the long term. Hence, all BIOLAND members and partners are obligated to observe measures making a long-term sustainable production feasible. These measures involve the observance of compensation contributions for sustainable production, whereas upward deviations are permissible. The contributions may also contain agreements for long-term supply and quantity planning. For certain production fields, the Main Committee of BIOLAND can conclude specific implementing rules for a respective value added security system describing the special measures to be observed.

8.2 Production recording

The contractual operation is obligated to participate in the annual production recording (operation reports).

8.3 Marking and packing

Contractual operations are obligated to mark their products at distribution to BIOLAND contractual partners, produced in accordance with the standards, with the trade mark BIOLAND. In case of distribution to final customer corresponding marking should be applied.

Products from BIOLAND production purchased from other contractual operations may only be marketed under the own name if not using any marks like “producer”, “from BIOLAND farm” or any similar sign referring to own production. Exempted from this is the purchase of raw materials for mixed products at processing on the own farm, unless the ingredients of the mixed products are mainly home-produced, as well as the purchase of products which are not available within short term from own production for special reasons.

The BIOLAND association designs marking and packing material. The use of other or own marking or packing material requires the explicit approval of BIOLAND. Uncontrolled packing material may not be used.

8.4 Sales to commercial buyers

In selling to commercial buyers, the contractual partners of BIOLAND association or, respectively, other trade partners with whom BIOLAND co-operates, are to be given preference.

8.5 Use of BIOLAND trade mark

Contractual operations are obligated to actively and continually promote and care for the BIOLAND trade mark.

All activities aim at increasing the degree of awareness of the trade mark and at clearly marking BIOLAND products on the market and at preventing the trade mark's misuse.

The brand BIOLAND has to be used according to the "guidelines for brand use" as amended. The operations will inform BIOLAND immediately of any misuse or unauthorised use of the BIOLAND trade mark on the part of association members or other users of the trade mark on the market and in advertising.

8.6 Marketing through BIOLAND direct marketing points of sale

8.6.1 General regulations and validity

The following policy describes the regulations for marketing in particular through:

- points of sale directly on the farm
- points of sale offside the farm (with BIOLAND-/farm advertising)
- mail-order
- delivery services

In the following collectively referred to as BIOLAND direct marketing points of sale (BIOLAND DVV).

The compliance to the BIOLAND marketing policy is valid for all BIOLAND producing businesses as well as for all direct marketing points of sale which are directly legally bound to the BIOLAND business. It is binding also for all direct marketing points of sale which seem to belong to the BIOLAND business to the consumer's point of view. The BIOLAND contractual business coherent in that sense has to ensure that the operator of the BIOLAND direct marketing point of sale concludes an independent BIOLAND dealer contract.

BIOLAND direct marketing points of sale are unique. It is the aim of the BIOLAND direct sellers to offer on their own points of sale as much products as possible, and processed goods thereof, produced on their own farm, co-labelled with the BIOLAND trade mark. It is strived for the largest quantity of BIOLAND products. Products from regional BIOLAND businesses are to be listed preferably.

8.6.2 Sales of foodstuff on BIOLAND direct marketing points of sale

BIOLAND direct sellers generally offer organic quality foodstuff.

The subsequent conventional foodstuff may be sold at direct marketing points of sale under following circumstances:

- mineral water
- salt
- plants and plant parts from wild collection
(refer to the applicable BIOLAND standards item 3.9)
- game (except game kept in reserves – the BIOLAND standards are applicable here),
labelled with "game from non-certified hunting"
- wild fish corresponding to the limits as per implementing regulation (EU) 2021/1165,
Annex V, part B (labelled with "conventional")

In justified individual instances BIOLAND can grant a time-limited permission for selling conventional products.

8.6.3 Sales of Non-Food products on BIOLAND direct marketing points of sale

It is distinguished between following cases:

- Non-Food products not subject to a legal organic certification (EU organic regulation) and not subject to specific BIOLAND regulations, can be offered in BIOLAND direct marketing points of sale. Except are the product groups subject to the additional criteria stipulated by the BNN (Bundesverband Naturkost Naturwaren e.V.) in the „Assortment guidelines for the specialised natural food trade“. These product groups have to fulfil the prerequisites stipulated therein. Articles of latter category not fulfilling these conditions may be offered corresponding to admission requirements as per 8.6.2.
- For Non-Food products not subject to a legal organic certification (EU organic regulation) and for which there are specific BIOLAND regulations available (for example dog food), the BIOLAND demands are to be kept.

8.7 Commercially operated farm shops and market stands

The standards apply also to all of the non-agricultural parts associated with the BIOLAND operation itself such as farm shops, market stands in as far as these appear for the consumer to be connected to the operation. The contractual operation is obligated to arrange the necessary to ensure that the BIOLAND standards are being observed on the non-agricultural operation, that BIOLAND inspections are being carried out and that the necessary documentation and records required for inspection are made available to the persons or inspection bodies appointed by BIOLAND for inspection.

9 Contractual and Inspection Measures

9.1 Responsible bodies

The responsibilities for all matters in connection with these standards as well as for the rights and duties of the members are regulated in the articles of incorporation (statutes) of BIOLAND e.V. Verband für organisch-biologischen Landbau.

9.2 Conversion

9.2.1 Producer contract

The sale of products under the trade mark BIOLAND presupposes the conclusion of a producer contract with the issue of an operating number which carries the obligation to comply with the standards of BIOLAND. Producer contracts are concluded in relation to areas and to single persons. Prerequisite for the conclusion of a contract is the membership in BIOLAND e.V.

When a contract is issued, a visit is made to the operation by a person authorised by BIOLAND. Each producer contract will be accompanied by a binding conversion plan. All of the conversion steps will be specified in this and, in particular, the resulting possible commencement of the use of the trade mark BIOLAND for the individual branches of the operation. Any subsequent deviating agreements between the operation and BIOLAND must be made in writing.

In the case of pending difficulties in plant or animal production or in marketing or in the case of factual uncertainty the manager of the operation must contact BIOLAND in due time prior to reaching a decision (as a rule, in writing).

9.2.2 Conversion of total operation

Contractual operations are obligated to cultivate all lands and production branches of the operation in accordance with the standards as currently amended.

The keeping of utilizable animal species, for which these standards do not provide explicit regulations, requires the approval of BIOLAND, likewise the use of the trade mark BIOLAND for the products of such branches of production.

9.2.3 Use of trade mark for plant products

The use of the trade mark BIOLAND with the addition “from conversion” can be used for plant products consisting of a single ingredient of an agricultural source when the area has been cultivated in accordance with the standards for 12 months prior to the harvest. For reasons of importance, this period can be extended.

The trade mark BIOLAND can be used if the land is cultivated in accordance with the standards for a period of 24 months prior to sowing and in the case of perennial cultures for 36 months prior to harvesting.

If new areas (fields) are added to the operation, then these must be put through the process of conversion. Efforts should be made also in the cases of rented areas, to achieve long-term, organic-biological cultivation.

It is not permitted to simultaneously plant the same types of plants on different areas of the operation which are at different stages within the conversion process. Exceptions to this are:

- perennial cultures
- growing of vegetables and ornamental plants, the cultures which are planted parallel to one another are easily differentiated from each other
- growing of fodder plants

For annual crops applies: The use of the trade mark BIOLAND is only permitted for crops the sowing or planting of which took place only when the fields are under BIOLAND control. Corps that are overlapping in time must be clearly distinguishable.

9.2.4 Use of trade mark for animal products

9.2.4.1 Product related conversion

When purchasing cattle, sheep, goats and pigs from non-BIOLAND-operations, the brand BIOLAND can only be used for the animals and the meat at the earliest after 3 months period of keeping on the BIOLAND farm. Poultry for fattening shall be kept at least half of the fattening period on the BIOLAND farm.

For conversion of animals from conventional origin the following is valid:

Animal products may first be marked with the trade mark BIOLAND at the earliest when the beginning of the conversion of the areas for fodder/feeding took place at least 12 months prior to this and the subsequent following periods for conversion for feeding and keeping of all of the animal species have been adhered to in accordance with the standards (see 4):

- milk: 6 months
- cattle: 12 months and in any case minimum three quarters of the animal's lifetime. The use of the trade mark BIOLAND is not permitted for beef from cattle that was born on conventional farms and/or raised with feedstuffs non-compliant with these standards
- sheep, goats: 6 months
- pigs: 6 months
- six weeks for poultry for egg production if put in barn not later than the third day of life
- poultry meat: 10 weeks (if put in barn not later than the third day of life), for small poultry 6 weeks
- seven weeks for Peking ducks if put in barn not later than the third day of life
- fallow-deer and red deer: 12 months
- rabbits: The use of the trade mark BIOLAND is only permitted if the animals were kept and raised with feedstuffs compliant with these standards from birth.
- When marking eggs with "BIOLAND egg with brother cock breeding" the minimum period for fattening the brother cocks is 70 days and the fattening is to be carried out according to regulation (EU) 2018/848. For each stabled young hen, the products of which are being marked as above, one brother cock is to be stabled.

For this marking, as of 31st December 2026, it is mandatory at each purchase of young hens to fattening BIOLAND brother cocks to the same quantity (in 2024 this requirement will be verified).

Feed in accordance with the standards is specified as being:

- organically produced fodder: fodder from lands which has been managed organically a minimum of 24 month prior to sowing, in case of permanent grassland 24 months prior to the beginning of the use as fodder
- permissible fodder and conversion fodder (in accordance with 4.4.2 and 4.5.1)

The use of the trade mark BIOLAND can start earliest when the all animals of the same species are husbanded and fed according to the standards.

In bee-keeping, the use of the trade mark BIOLAND can be used at the earliest 12 months after the commencement of conversion if the bee colonies comply with the requirements of 4.10.

In aquaculture, the use of the trade mark BIOLAND can be used at the earliest 12 months after the commencement of conversion if the ponds comply with the requirements of 4.11.

Keeping of poultry in cages in the operation must be discontinued prior to any use of the trade mark.

9.2.4.2 Simultaneous conversion of the total operation

In case of simultaneous conversion of the total operation (i.e. all lands and farm animal categories) all animal products produced from animals, present at the commencement of the conversion, and its progeny can be marketed under the use of the trade mark BIOLAND in deviation from 9.2.4.1, provided that the animals are fed mainly with the operation's own fodder.

The use of the trademark BIOLAND is not permitted for beef from cattle that was born on conventional farms and/or raised with feedstuffs non-compliant with these standards.

9.2.5 Conversion periods

Conversion is carried out without delay, in plant production in one step. In exceptional cases this can be effected in steps and must be completed at the latest after a maximum of three years. Conversion shall be effected according to a conversion plan issued in agreement with the BIOLAND advisory service and the BIOLAND quality assurance.

9.2.6 Non-permissible operating resources

Resources, the use of which is excluded by the standards, may no longer be available in the operation.

9.2.7 Further training

The managers of operations must possess the necessary theoretical and practical skills. Minimum evidence of this, in addition to the prior completion of agricultural training or professional experience, is supplied by successful attendance of an introductory course in organic biological farming. The exchange of experience and the discussion on the operating conditions are important basic factors of further training and the gaining of the necessary confidence. Each manager is a member of a regional or specialised group. The operation managers participate as actively as possible in group work and in the exchange of experience in the group.

9.3 Inspection

9.3.1 General

The BIOLAND association will check compliance with its standards by the contracting operations (producers). Inspection checks will assist the contracting parties in the further development of the operation in the sense of these standards.

The stipulations on obligation for recording and documentation of the critical inspection points are to be reflected according to regulation (EU) 2018/848 and the downstream legal acts as well as the respective official directive.

9.3.2 Inspection procedure

The inspection of contractual operations is composed of supplying written answers to a questionnaire (operation report) and an inspection visit for which an inspection report will be written. It will be carried out at least once per year by an inspector authorised by BIOLAND who is both independent and competent. The operation inspected in this manner will receive a copy of its operation report and the inspection report.

In the case of a step by step conversion, the inspection of the operation will also include those parts of the operation not yet converted.

A commission for recognition set up by BIOLAND for this purpose will decide annually on instructions, warnings and sanctions. The basis for any decisions of this nature is a catalogue of sanctions published by BIOLAND.

9.3.3 Necessary documentation and information from the operation

The operations must keep clear records of all points to which these standards apply: cultivated area, crop rotation, fertilizing, plant protection, animal stock, keeping, feeding, and treatment of animals, marketing, storage and purchasing from external sources.

BIOLAND is entitled to require and store member data which will serve for recording production quantities and for inspection purposes.

Additions to the area must be reported to BIOLAND without delay. This applies also to any change in the operation address or change in the management of the operation.

BIOLAND can require the operation to execute soil examinations, quality tests and examinations of residues. If there is evidence of a breach of the standards, the costs of the examinations will be borne by the operations.

9.3.4 Right to examine records and right of access

The operation is required to afford the representative of BIOLAND access to the whole of the operation in order to carry out inspections. BIOLAND is entitled at any time to have the operation and the books of the member examined by an employee or an authorised person. Such person is sworn to secrecy and may not pass on any information to any third party.

9.3.5 Inspection on animal well-being and management

The quality of the animal husbandry (see item 4.1 and 4.2.1.1) is inspected on the basis of husbandry-referring and product-related criteria characterizing the animal well-being and the production quality. For this, BIOLAND issues guidelines describing the essential checkpoints and appraisal factors referring to the animal species.

9.4 Commencement of validity, implementing rules and exceptions

Amendments to the standards become valid on their being published in the association's organ, the magazine "bioland".

Operations which at the time of the respective amendment to the standards have concluded a producer or processor contract with BIOLAND and do not yet fulfil the amended standards have, with effect from the date of publication, one year's time, in case of constructional changes in buildings two years (unless another deadline is expressly determined) in which to adapt to comply with the new conditions with provision to further going conditions of the regulation (EU) 218/848 and the downstream legal acts.

There are no transitional periods for the construction of new barn buildings.

In justified individual instances and in addition to the exceptional cases stated in the standards, BIOLAND has the possibility to grant a limited special authorization contrary to existing standards within the framework of the EU regulation on organic production and the pertinent specialized law; following an application and expert examination.

10 Annex

10.1 Permissible soil conditioner and fertilizer as well as components of substrates (see 3.4)

For the use of fertilizers and soil conditioners the legal regulations, above all the conditions of the regulation (EU) 2018/848 and the downstream legal acts have to be observed. Materials marked with * have special requirements as per implementing regulation (EU) 2021/1165. If there are any doubts as to the permissibility or quality of a fertilizer, information is to be obtained from BIOLAND.

10.1.1 Summary of purchase limits for nitrogen of the different cultures

Details on fertilizing can be gathered from the corresponding chapters.

Culture	Purchase limit N per year and ha
Arable farming and grassland	40 kg
Vegetable gardening (except greenhouse cultivation)	110 kg
Fruit growing	90 kg
Viticulture	150 kg N per ha in 3 years (whereas max. 70 kg N* per year and ha may be available for the plants)
Hop	70 kg
Ornamental plants, herbaceous perennials and woody plants (except nurseries)	110 kg
Nurseries	90 kg

10.1.2 Fertilizers and soil conditioner from organic operations

- farmyard manure and poultry manure
- slurry following processing
- liquid manure
- composts from organic refuse
- substrates from cultures of mushrooms
- straw for mulch purpose

10.1.3 Fertilizers from conventional operations

Not from industrial animal husbandry as per regulation (EU) 2018/848:

- cattle manure
- sheep and goat manure
- horse manure

10.1.4 Organic complementing fertilizers and soil conditioners as well as components of substrates

- quality assured plant composts (composts from greens) and composted household waste out of separate collection (bio-waste container) according to the BIOLAND criteria and specifications in the actual version
- quality assured composts from bark of chemically untreated wood after cutting
- saw dust, wood cuttings and wood ashes of chemically untreated wood after cutting
- peat, only in substrates and with the restrictions mentioned in chapter 3 and 5
- the following products and residue of animal origin:
 - horn shavings, horn meal, feather meal
 - only for vegetable production, herb cultivation, ornamental plants, potato growing degree of ripeness 1, potato growing degree of ripeness more than 1 only until end of 2023, and permanent cultures: hair meal and bristles, wool
- products from organic origin or production:
 - hair meal, bristles, feather meal, horn shavings and meal, hoof shavings and meal, feather meal and wool
- products and residue of plant origin (e.g. castor-oil groats, rape groats, vinasse only in gardening and permanent cultures)
- slops and slop extracts (besides ammonium slops)
- vegetable carbon (pyrolysis products from organic material of plant origin)*
- algae and algae products*
- Leonardite (only if obtained as a by-product of mining activities)
- fermentation residues from eco-biogas plants (as per requirements refer to 2.6.1.1)

10.1.5 Mineral complementing fertilizer

- mineral powder
- clay and clay minerals
- raw phosphate (ground, soft texture, not partially processed)*
- thomas phosphate*
- raw potassium salt (e.g. Kainit)*
- patent potassium (potassium magnesia)*
- calcium sulphate* (plaster) of natural origin
- potassium sulphate*
- magnesium sulphate (kieserite) of natural origin
- magnesium carbonate of natural origin
- calcium carbonate (e.g. carbonate of lime, dolomite lime, shell lime*, marine algae lime) of natural origin
- industrial lime from sugar production (carbolime)
- solution of calcium chloride (only treatment of leaves for apple trees in case of proved calcium deficiency)
- elementary sulphur*
- trace element fertilizers*

10.1.6 Preparations from micro-organism

Preparations from micro-organisms to use in soils, composts and substrates, e.g. for advancing resetting processes if their compositions comply with these standards.

10.2 Permissible plant treatment materials and methods (see 3.6)

For the use of plant protection and plant strengtheners the legal regulations, above all the conditions of the regulation (EU) 218/848 and the downstream legal acts as well as the plant protection law, have to be observed. Only the restrictions in the use exceeding these regulations are mentioned below.

10.2.1 Biological and biotechnical measures

- planned use of beneficial animals (e.g. predatory mites, parasitic hymenoptera)
- insect traps (glue traps)
- culture protection nets, mulch foils etc.

10.2.2 Plant protection materials and plant strengtheners

The agents specified may only be used in as far as these are not used in combination with other plant protection agents which are not named here. The application instructions as per annexes of plant protection implementing regulation (EU) No. 540/2011 are to be observed.

10.2.2.1 Generally permissible materials

- stone meal and clay
- laminarin
- COS-OGA (chitooligosaccharide-oligogalacturonide)
- water glass (sodium silicate)
- herb extracts, as far as applicable according to plant protection law
- pheromones (attractant; sexual behaviour disrupter; only in traps and dispensers)
- azadirachtine from *Azadirachta indica* (Neem tree)
- paraffin oils
- plant oils
- terpene (eugenol, geraniol, thymol)
- fatty acids (“soft soap”)
- iron-III-phosphate
- milk and whey products
- micro-organisms (bacteria, virus, fungi), e.g. bacillus thuringiensis preparations
- sodium and potassium bicarbonate
- lecithin
- quartz sand as repellent
- sheep fat as repellent (only applicable to uneatable parts of the plant and if the plant material is not fed to sheep or goats)
- plant strengtheners
- basic substances as defined by article 23 para.1 of the EU plant protection regulation No. 1107/2009 (substances, which are not allowed as plant protection substance but, among others, can also be used for plant protection purposes), provided that they are of vegetable or animal origin and also regarded as foodstuff.
- diatomaceous earth (stored product protection)
- carbon dioxide (stored product protection)

10.2.2.2 Materials only permissible in horticulture and permanent cultures as well as in the indicated crops

- pyrethrines from *Chrysanthemum cinerariaefolium* (without the synergist piperonyl butoxide)
- sulphur
- sulphuric lime (calcium polysulfide)
- maltodextrin
- copper preparations in the form of copper hydroxide, copper oxychloride, copper oxide, tribasic copper sulphate, copper-lime mixture/Bordeaux mixture (max. copper amount 3 kg/ha and year, in hop cultivation max. 4 kg/ha and year, in potato cultivation only with permission of BIOLAND. If agents with copper content are used, the copper content of the soil must be continuously monitored by means of soil analysis.)
- hydrolysed protein excluding gelatine (attractant; only applicable in connection with other products of this appendix)
- calcium hydroxide (against fruit tree cancer at fruit trees)

10.3 Maximum permissible stock density

The max. permissible stock density as per following table is valid. The max. permissible stock density is geared to the nutrient accrual of animal husbandry which has to be calculated according to the stipulations of regulation (EU) 2018/848. If animals are not kept throughout the whole year or, as a result of age or a change in their use, are allocated to another animal category, the numbers are to be calculated in accordance with the average number of the animals kept in the year.

Animal category or species	maximum permissible number of animals per hectare
Horses from 6 month on	2
Fattening calves	5
Other cattle of less than 1 year	5
Male cattle between 1 and 2 years	3,3
Female cattle between 1 and 2 years	3,3
Male cattle from 2 years on	2
Breeding heifers	2,5
Fattening heifers	2,5
Dairy cows	2
Cull dairy cows	2
Other cows	2,5
Rabbits (number of ewes plus offspring)	20
Ewes	13,3
Ewe goats	13,3
Piglets	74
Breeding sows	6,5
Fattening pigs	10
Other pigs	10
Fattening chicken	280
Laying hens	140
Young hens	280
Fattening ducks	210
Fattening turkeys	140
Fattening geese	280
Pigeons	500
Quails	800
Fallow-deer	10 PED ^{1,2)}
Red deer	5 PER ^{1,3)}

¹⁾ The pen area for fallow-deer and red deer is regulated in chapter 4.2.7. Even with neglecting the pen area and the stock density for fallow-deer and red deer the max. permissible stock density of the remaining business may not be exceeded.

²⁾ 1 production unit fallow-deer (PED) = 1 adult animal, 1 calf, 1 one-year-old (pricket, hind) and one stag proportionately.

³⁾ 1 production unit red deer (PER) = 1 adult animal, 1 calf, 1 one-year-old (pricket, hind) and one stag proportionately.

10.4 Stipulations for purchasing fodder of non-organic origin and the use of single foodstuff and feedingstuffs additives as feed additive

Certain conventional foodstuff and feed additives may be used with consent of BIOLAND. Deviating from the limits mentioned, further approvals can be given in case of disaster situations (see 4.4.1).

Conventional feed is subject to limitation by maximum percentage referring to the dry weight content of the foodstuff of agricultural origin and the annual average of the ration for one animal category. Mineral blends are not taken into account.

Following components can be used subject to official approval and according to the specific demands of regulation (EU) 2018/848 and the downstream legal acts:

10.4.1 Feed from non-organic origin for all animal categories at the beginning of conversion in case of conventional marketing

Only in case of complete conventional marketing of all animal products and with consent of BIOLAND max. 20% conventional feed may be purchased (referring to the dry weight content), within a period of 5 years commencing conversion. If own feed is available, it has to be fed at priority.

In addition to the single foodstuff and feedingstuffs additives listed in 10.4.2 the following fodder may be used for all animal categories:

- hay
- grass silage
- leguminous plants
- cereals and mill residue products
- oil-bearing seeds
- oil cakes
- oil expellers
- fodder beets

10.4.2 Single fodder and additives as feed additives in feeding animals as per article 24 of regulation (EU) 2018/848 and Annex III of implementing regulation (EU) 2021/1165

- volume and trace elements according to Annex III Part A (1) and Part B (3) b implementing regulation (EU) 2021/1165

For copper and zinc the following limits are set (max. content in the ration):

Animal category (mg/kg T)	Cu	Zn
Piglets	30	100
Fattening pigs	20	100
Breeding sows/boars	20	100
Calves	15	100
Cattle	30	100
Sheep	15	120
Other livestock	20	120
		(Horses 80)

It is not permitted to bring in strewing material for the purpose of adding Cu and Zn.

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- herbs, spices, molasses according Article 24 para 3 letter e figure iv of regulation (EU) 2018/848 and Annex III Part A (2) of implementing regulation (EU) 2021/1165
- certain protein compounds according Article 24 para 3 letter e figure iv of regulation (EU) 2018/848 and Annex III Part A (2) of implementing regulation (EU) 2021/1165, for piglets up to 35 kg only potato protein, for young poultry only corn gluten and potato protein (until 31st December 2025)
- yeast and yeast products according Annex III Part A (2) of implementing regulation (EU) 2021/1165
- preservatives according Annex III Part B (1) a of implementing regulation (EU) 2021/1165
- antioxidant substances according Annex III Part B (1) b of implementing regulation (EU) 2021/1165
- binders, anti-caking agents according Annex III B (1) d of implementing regulation (EU) 2021/1165
- silage additives according Annex III Part B (1) e of implementing regulation (EU) 2021/1165
- sensory additives according Annex III Part B (2) of implementing regulation (EU) 2021/1165
- vitamins, provitamins and chemically well-defined substances having similar effect according Annex III Part B (3) a of implementing regulation (EU) 2021/1165
- enzymes and microorganisms according Annex III Part B (4) of implementing regulation (EU) 2021/1165

10.5 Pharmaceutical products, the use of which is prohibited or limited in keeping animals

10.5.1 Use is prohibited

Active agents:

- brotizolam (appetizer)
- fenvalerat (ecto-antiparasitic)
- piperazin (endo-antiparasitic)
- monensin (antibiotics)

Groups of pharmaceuticals:

- fluorquinolone (gyrase inhibitor) (antibiotics)
- pharmaceuticals containing active agent formaldehyde (allowed: vaccines containing formaldehyde)
- preparation combined with chemotherapeutic agents (antibiotic) and glucocorticoides (inflammation inhibitor) for systemic treatment (oral or by injection)
- oestrogens (female sex hormones)

10.5.2 Restrictions on use

Active agents:

- deltamethrine only in case of severe ecto-parasite or fly infestation for ruminants
- demethylsulfoxide (DMSO) (inflammation inhibitor) only for horses, not serving for food production
- gentamicin (antibiotics) in injections only intravenous (allowed: vaccines containing gentamicin)
- metamizol (inflammation inhibitor) only in case of colics at horses and calves
- neomycin (antibiotics) only for local and not for systemic use (allowed: vaccines containing neomycin, udder injectors)
- thiabendazol (endo-antiparasitic) only if waiting period of six days is observed

Groups of pharmaceuticals:

- antibiotics and chemotherapeutics (inflammation agents):
 - in case of udder illness if possible only when a bacterial examination with resistance test has carried out (individual animal or quarter milk samples)
 - B-Lactam-antibiotics shall be given priority if effective
 - short-term antibiotics are preferable to long-term ones
 - a waiting period of at least 48 h must be observed
- antiparasitic only if evidence of parasites, in case of high infection pressure even before appearance of clinical symptoms (strategical controlling), a waiting period of at least 48 h must be observed
- avermectine (antiparasitic) only in individual case of proved parasite infestation at goats and suckling sheep and in case of severe infestation of ecto-parasites at pigs and sheep
- gestagens, gonadotropins, HVL-preparations and Prostaglandins only for individual animals
- glucocorticoids (inflammation inhibitors) only in direct life-threatening situations, acute allergic conditions, in case of non-infectious inflammations and acute metabolic disorders. Local application is permissible in case of severe inflammations.
- neuroleptics and other sedatives, only for individual animals with medical indication
- organophosphates only as pour-on-preparations in case of ecto-parasitosis of pigs, as cleanser for sheep in case of scaly leg mite
- synthetic pyrethroids (antiparasitic) only as pour-on-preparations or earclips

(allowed: in individual cases with medical indication also as solution)

- tetracyclines (antibiotics), in case of injections possibly only intravenously;
long-term tetracyclines (antibiotics) only for treating chlamydien infection
- “drying agents” (long-term antibiotics) only for problem animal with
medical indication and detection of infectious agent

10.6 Space requirement at keeping animals

Minimum barn- and open air areas and other features of animal housing of different animal species and categories of production

10.6.1 Cattle, sheep, goats and pigs

	Live weight (kg)	Barn area (net area available to animals) (m ² /animal)	Outdoor area (open air areas exclusive grazing areas) (m ² /animal)
Breeding and fattening cattle	up to 100	1,5	1,1
	up to 200	2,5	1,9
	up to 350	4,0	3,0
	over 350	5,	3,7,
		min. 1 m ² /100 kg	min 0,75 m ² /100 kg
Dairy cows		6,0	4,5
Breeding bulls		10,0	30,0
Sheep and goats	per sheep/goat	1,5	2,5
	per lamb/kid	0,35	0,5
Suckling sows with piglets up to 40 days old	per sow	7,5	2,5
Fattening pigs	up to 50	0,8	0,6
	up to 85	1,1	0,8
	up to 110	1,3	1,0
	over 110	1,5	1,2
Piglets	over 40 days old and up to 35 kg	0,6	0,4
Breeding pigs	female breeding pig	2,5	1,9
	male breeding pig	6,0	8,0
		(10, only if live cover is in box)	

10.6.2 Poultry

	Barn area (net area available to animals)			Outdoor area (m ² area available to each animal at area rotation)
	Number of animals/m ²	cm perch/animal	nest	
Laying hens	6	18	5 laying hens per nest or in case of a common nest 125 cm ² /animal	4 ¹⁾
Young hens	3 rd up to 10 th week of live max. 16 animals, above 11 th week of live max. 13 animals, max. 21 kg live weight	min. 10 cm or min. 100 cm ² elevated levels, above 11 th week of live min. 12 cm		1 ¹⁾
Brother cocks	from 8 th week of live max. 14 animals, max. 21 kg live weight	min. 10 cm or min. 100 cm ² elevated levels, from 100 days of live min. 12 cm or 120 cm ² elevated levels		1 ¹⁾
Fattening poultry (in solid barns)	10, max. permissible live weight 21 kg per m ²	5 (guinea fowls 20) or min. 25 cm ² elevated levels		fattening chicken and guinea fowls 4 ¹⁾ Ducks 4,5 ¹⁾ Turkeys 10 ¹⁾ Geese 15 ¹⁾
Fattening poultry (in mobile barns)	16 ²⁾ in mobile poultry barns with a max. permissible live weight of 30 kg per m ²			2,5 ¹⁾
Small poultry (in solid barns)	heated area: 15 animals/m ² or max. 3 kg live weight per m ² exterior climate area: 30 animals/m ² or max. 6 kg live weight per m ²		quails: 150 animals/m ² or 600 cm ² single nest for 8 laying quails pigeons: 0,5 m ² per each pair	recommended in protected green open air run: 0,4 ¹⁾
Small poultry (in solid barns with integrated exterior climate area)	at night max. 22 animals or 4,4 kg live weight per m ² during the day 11 animals or 2,2 kg live weight per m ² of total accessible area		quails: 150 animals/m ² or 600 cm ² single nest for 8 laying quails pigeons: 0,5 m ² per each pair	recommended in protected green open air run: 0,4 ¹⁾
Quails (in mobile barns)	at night max. 4,4 kg per m ²			obligatory in protected varying open air 0,1 ¹⁾

¹⁾ Unless upper limit of 170 kg N/ha/year is not exceeded.

²⁾ Only for mobile barns with a floor surface up to a maximum of 150 m², which remain open at night.

10.6.3 Rabbits

Barn area

	Barn area (net area available to each animal without platforms in m² per animal) solid barn as resting area	Barn area (net area available to each animal without platforms in m² per animal) mobile barn as resting area
Nursing ewes incl. nursed young animals	0,6 m ² per mother with young animals at a live weight of the mother less than 6 kg 0,72 m ² per mother with young animals at a live weight of the mother of more than 6 kg pro	0,6 m ² per mother with young animals at a live weight of the mother less than 6 kg 0,72 m ² per mother with young animals at a live weight of the mother of more than 6 kg
Pregnant animals and female breeding animals	0,5 m ² per pregnant animal or female breeding rabbit at a live weight of less than 6 kg 0,62 m ² per pregnant animal or female breeding rabbit at a live weight of more than 6 kg	0,5 m ² per pregnant animal or female breeding rabbit at a live weight of less than 6 kg 0,62 m ² per pregnant animal or female breeding rabbit at a live weight of more than 6 kg
Fattening animals from weaning until slaughtering Offspring rabbits (from end of fattening until 6 months)	0,2	0,15
Adult bucks	0,6 1, if the buck welcomes female animals for mating	0,6 1, if the buck welcomes female animals for mating

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Open air

	Open air (open air run with plants, preferably grazeland) (net area available to each animal without platforms in m² per animal) solid barn	Open air (net area available to each animal with platforms in m² per animal) mobile barn
Nursing ewes with nursed young animals	2,5 m ² per mother with young animals	2,5 m ² per mother with young animals
Pregnant animals / female breeding rabbits	2,5	2,5
Fattening rabbits from weaning until slaughtering Offspring rabbits (from end of fattening until 6 months)	0,5	0,4
Adult bucks	2,5	2,5

10.7 Cleaning und disinfecting agents for barns, installations and devices

- alcohol
- formic acid
- caustic potassium
- caustic soda
- quick lime
- acetic acid
- potassium and sodium soaps
- lime
- lime milk
- lactic acid
- sodiumhypochlorite
- sodiumcarbonate
- oxalic acid
- peracetic acid
- natural essences of plants
- phosphoric acid (milking equipment)
- nitric acid (milking equipment)
- water and steam
- hydrogenperoxide
- citric acid
- cleaning and disinfecting agents for teats and milking devices
- permissible means for room treatment against flies and parasites analogous to Annex 10.2 and according regulation (EU) 2018/848 and implementing regulation (EU) 2021/1165

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10.8 List of permissible agents in cleaning and disinfection means at plant production

- water and steam
- potassium and sodium soap
- lime milk
- lime
- burnt lime
- ozone
- benzoic acid
- sodium hydroxide, (caustic soda, soda ash)
- potassium hydroxide (lime potash, caustic potash)
- hydrogen peroxide
- natural plant essences
- citric acid, peracetic acid, formic acid, lactic acid, oxalic acid and acetic acid
- alcohol
- easy and fully degradable surfactants
(e.g. alkyl polyglycosides, abbrev. APGs or sugar surfactants)
- substances based on microorganisms

10.9 List of processing standards (branch standards)

- brewery products
- bread and pastries
- eggs and egg products
- produces of soya and other vegetable protein carriers
- meat and meat products
- vegetable and fruit
- grain and grain products
- yeast and yeast products
- pet food
- mead
- milk, dairy products, butter, cheese, ice cream
- pest control in storage and operation premises
- edible oils and fats
- spirits
- sweeteners
- pasta
- wine and sparkling wine

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