Compilation of comments and responses from the IFOAM Standard Committee // Comments received during the public consultation period from March 14th to April 30th, 2022.

The general response to the IFOAM Standard structure:

Considering the large number of comments related to the structure of the standard, the Standard Committee decided to continue the animal husbandry section number five instead of creating a separate section under number seven. Hence the Standard for TERRESTRIAL INVERTEBRATES has been designed as a stand-alone standard but will be inserted in the Animal Husbandry chapter after the Bee Keeping. It will have the starting paragraph number 5.9. Comments and responses to them below have the old system of numeration that started from the number 7.

CHAPTER VII: PRODUCTION OF TERRESTRIAL INVERTEBRATES

This chapter applies to:

- production of invertebrates and products derived from them which are marketed as certified organic for human food, animal feed or for any other purpose in organic supply chains;
- insects and other terrestrial invertebrates such as annelids and terrestrial snails.

This chapter does not apply to:

- aquatic invertebrates (e.g. crustaceans, mollusks, cephalopods) which are covered in the aquaculture chapter of this standard.
- management of invertebrates present on organic farms or used as organic inputs (worms for vermicompost, beneficial insects for bio-control) unless they are being marketed as certified organic
- bees which are covered in the beekeeping chapter of this standard.

Comment from David Gould (Food Chain, US)

It is good that IFOAM ratifies this first version on this standard. Because it is a new topic and the standard is written rather generally, and in order to improve it further, IFOAM should have in its workplan going forward a way to gather practical experience from stakeholders who use it, and thereby calibrate and refine requirements based on the practical experience across a range of species.

Standard Committee´s response

The standard committee cannot decide on this topic. It will depend on IFOAM´s resources.

Comment from Rioychi Komiya (Organic Shizukuishi PGS, Japan)

The specific examples of organic terrestrial invertebrates should be included in a Table of the draft standard.

Standard Committee´s response

We are not including specific species, as there is a risk of becoming too prescriptive or exclusive.

Comment from Joel Aitken (Organic Inspector and COR Livestock Standards Committee member, Canada)

Overall I think it is a clear and well written standard, it specifies the requirements without incorporating unnecessarily specific restrictions.

Standard Committee´s response

No response is required.

Comment from Jim Pierce (POETCom, Fiji)

Thank you for the opportunity to comment on the Draft IFOAM Standard for the production of organic terrestrial invertebrates.
In the Pacific, organic farming practices vary widely among and within the Countries and Territories. Quality Organic Norms, including IFOAM therefore, must be applicable to wide range of agriculture and culture and Must be uniformly applicable by certification bodies and understandable to farmers at all levels of production.

Invertebrate production is a timely and important issue in the Pacific. Interest in growing invertebrates is mostly focused on production of locally produced protein for feed, but there is interest in producing for food as well. A major challenge to organic livestock production in the Pacific islands is the availability and associated cost of quality feed, especially domestically produced feed for self-sufficiency.

The top priority comment is that while we agree that organic invertebrate production for food for human consumption should require organic feed, invertebrate production for livestock feed should incorporate nutrient cycling and so should not be limited to "organic feed" as stated in 7.3.1 but should allow for non-organic feedstock, similar to compost feedstock which is not required to be from organic sources.
It is worth noting that as the owners and managers of the Pacific Organic Standards, POETCom is undergoing the development of a companion Guidebook with explanation, resources and case studies of best practices. The Guidelines will include Invertebrate production, so these norms, and these comments, will positively influence the outcome.

Standard Committee´s response

No action point here, see 7.3.1

Comment from Fiona Marty, (FNAB, France)

The limitation of the size of the farm is not mentionned in the document. However this shall be a core of the organic production in order to ensure a distinction between organic and conventionnal production : to safeguard the image of organic farming towards the consumers and to avoid the industrialisation of organic farming production.
Key concept of organic production which are in line with the general idea of the limitation of the size of the farm, are not unfortunately not mentionned in this norm :
1/ Soil bound production : the farm shall not only have facilities for invertebrates production, but shall have land :
- the farm shall have surfaces to produce the feed for the insects [for example : enough surfaces of wheat to produce the wheat bran (coproduct of wheat flour for human consumption) as feed for the mealworms];
- the farm shall have surfaces to apply the droppings/effluents produces by the invertebrates.
2/ Prevention of diseases : limitation of pest pressure (when limiting the number of individuals in a same facility).

Those key principes (soil bound production & limitation of the size of the farm) shall be mentionned in this norm, in order to avoid the industrialisation of the organic invertebrates production.

Standard Committee´s response

A limitation on the size of the farm could be desirable. However, we should discuss this topic once the sector is more developed. Nowadays, there are some limiting factors. But, in the future, we may go more specific.

Comment from John Foster, Wolf and Associates, US

Thank you to IFOAM for addressing this important area of organic production. Creating an organic source of a high-protein product, especially for livestock and poultry production will be critical as climate change, supply-chain disruptions, food insecurity etc. continue to challenge the supply of traditional sources of organic feed.
We are suggesting that the IFOAM Standard include definitions for purging phase and photoperiod as these are not widely understood.

The appendices of allowed substances in the IFOAM Standard should be reviewed to include any substances specific to the production of organic terrestrial invertebrates. This is to allow optimal health conditions specific to invertebrate rearing. We are suggesting that the appendices include specific measures to clean snail slime in a non-invasive manner, and to include examples of preventing cannibalism by species. Slime in snails is a vital function, so removal by any means will be deleterious to the organism at some level.
Does the IFOAM Norms require the submission of an organic system plan to the certifying body? If it does, indication that the requirements of this chapter are to be included in the operation's organic system plan. Use of the term 'regularly' leaves much to be desired when CBs are to verify compliance through inspection.
We suggest using the term 'periodically' and also including a performance indicator relevant to the matter at hand. For example, ...*<< recording health conditions periodically sufficient to ensure that the operator is able to provide preventative measures that will improve the overall health...>>*

Standard Committee´s response

We highly encourage you to send us a list of substances you want to include. Regarding purging and photoperiod definitions, we can add definitions in section B of IFOAM Norms in IFOAM Standard.

Comment from Brian Baker (Belcairn Concerns, US)

General comment: I thought Chapter 7 was organic processing. Renumbering chapters should be avoided if possible. I suggest incorporating the standards in the livestock chapter and make it consistent with apiculture to the degree possible.

Standard Committee´s response

The Standard Committee has decided to include the invertebrates chapter in section 5.9 of the Animal Husbandry chapter.

7.1. Management of terrestrial invertebrates

General Principle

In the context of this chapter, organic terrestrial invertebrate production provides ingredients and proteins for use in organic food and feed as well non-food products. It is based on a resource efficient production system that complies with the four principles of organic agriculture which respects both the physiological and behavioral needs of the species concerned and minimizes any negative environmental impact.

Comment from David Gould (Food Chain, US)

Change the 1st sentence of the General Principle to read: *<< In the context of this chapter, organic terrestrial invertebrate production provides proteins and other ingredients for use in organic food and feed as well non-food products. >>*

Standard Committee´s response

We have rephrased *<<In the context of this section, organic terrestrial invertebrate production is a resource efficient production system that provides products for use in organic food, feed and non-food products, respects both the physiological and behavioral needs of the species concerned and minimizes any negative environmental impact.>>*

Comment from Brian Baker (Belcairn Concerns, US)

Rephrase as following:

<<5.9 Management of terrestrial invertebrates

General Principle

Organic terrestrial invertebrate production is a resource efficient production system that provides healthy food and non-food products, respects both the physiological and behavioral needs of the species concerned, and with minimal environmental impact.>>

Standard Committee´s response

We have rephrased as following:

<< 5.9.1 Management of terrestrial invertebrates

General Principle

In the context of this section, organic terrestrial invertebrate production is a resource efficient production system that provides products for use in organic food, feed and non-food products, respects both the physiological and behavioral needs of the species concerned, and minimizes any negative environmental impact. >>

Comment from Stefan Goldfinch

Add one sentence to the General Principle: Invertebrate production should be suited to the region and characteristics of the species.

Standard Committee´s response

We cannot consider this proposal. It would be complicated.

Requirements

Comment from Brian Baker (Belcairn Concerns, US) Add one requirement as follows: 5.9.1. Except as provided otherwise in this section, terrestrial invertebrates shall be managed consistently with the requirements for all other animals.
Standard Committee´s response We have written the standard as a complete standard. Other provisions in the chapter animal husbandry do not apply

7.1.1 Invertebrates may be reared entirely indoors in controlled environments, except for snails, which must have access to pasture.

Comment from Jim Pierce (POETCom, Fiji) Access to Pasture for snails needs explanation so that producers auditors and certifiers all understand.
Standard Committee´s response Please, explain the reasons why a definition of a pasture is needed.

Comment from John Foster (Wolf and Associates, US)

We suggest a change to 7.1.1 to read: Invertebrates may be reared entirely indoors in controlled environments, except for snails, which must have access to outdoor forage areas.

Standard Committee´s response

Please, explain the reasons why you would like to make this change.

7.1.2. The operator shall ensure that the environment, the facilities, stocking density and the population size provide for the behavioral needs of the invertebrates.

Comment from Jim Pierce, POETCom, Fiji

Regarding article 7.1.2 of this standard, *<<provide for the behavioral needs>>* is a nice phrase but still subjective, better than <<allows for natural behavior>>.

Standard Committee´s response

We will keep it as it is, consistent with animal husbandry standards. If we decide to change the livestock standard in the future, we might think about it.

Comment from (Fiona Marty, FNAB, France)

Add soil-bound production (to produce the feed and apply the eflluents)

Standard Committee´s response

In the present moment, the Standard Committee members disagree on soil -bound production.

7.1.3. In particular, the operator shall ensure the following animal welfare conditions:

a. sufficient free movement and opportunity to express normal patterns of behavior,

b. sufficient fresh air, water, feed (except in the purging phase), thermal and humidity comfort and photoperiod, as needed to satisfy the natural needs of the invertebrates;

c. minimizing stress and pain;

d. provision of suitable substrate and feeding materials for exploratory and foraging behaviors;

e. sufficiently structured habitat to provide hiding places and places of retreat

f. contact with conspecifics, for gregarious species

g. in addition to these general welfare conditions for all invertebrate categories, provisions for specific invertebrate groups also have to be taken into account, such as light requirements, stocking density, prevention of cannibalism.

Comment from David Gould, Food Chain, US

Revise part g to read:

<< g. in addition to these general welfare conditions for all invertebrate categories, provisions for specific invertebrate groups also have to be taken into account, such as light requirements, stocking density, and mitigation of the negative impacts of cannibalism on productivity.>>

Standard Committee´s response

We will take out the reference to cannibalism.

Comment from Joel Aitken, Organic Inspector and COR Livestock Standards Committee member, Canada

Will definitions of conspecifics and gregarious be included for quick reference?

Standard Committee´s response

The members of the Standard Committee are working on it.

Comment from Fiona Marty (FNAB, France)

Point g : The limitation of the density is a really crucial point that shall be stressed : both to avoid cannibalims between the individuals and to limit the pest/parasites pressure.

Standard Committee´s response

We refrain from putting specific stocking densities for specific species. At the moment, we do not have the expertise to do that.

Comment from John Foster (Wolf and Associates, US)

We suggest a change to 7.1.3.c to read: minimizing stress and damage to well-being.

Standard Committee´s response

We rephrase as <<minimizing stress and suffering>>.

Comment from Brian Baker (Belcairn Concerns, US)

Rephrase as follows, change: 9.93. In addition to the requirements for all species, the operator shall ensure the following animal welfare conditions for invertebrates:

a. Provision of suitable substrate and feeding materials for exploratory and foraging behaviors;
b. sufficiently structured habitat to provide hiding places and places of retreat

c) Light requirements, stocking density, contact with members of the same species, and prevention of cannibalism appropriate to the species.

Standard Committee´s response

The invertebrates standard was designed as stand-alone standard. Other provisions of animal husbandry chapter do not apply.

7.1.4. In facilities with a controlled environment, temperature, humidity, concentration of CO_2 and other damaging gases must be regularly monitored and appropriate measures must be taken to improve environmental conditions, when needed. Monitoring and measures taken must be recorded.

Comment from Noel Templer, NutriProduce Limited, Kenya

Overall, looks good. My reflection of line 7.1.4, 7.1.5 and 7.1.6 makes me wonder whether this can be attainable by smallholder producers who may be interested. Might be well-intentioned but possibly overbearing on a smallholder producer. Great draft so far!!! Thanks

Standard Committee´s response

Small producers should be monitored, whatever size they are. We acknowledge that we did discuss this.

Comment from Joel Aitken (Organic Inspector and COR Livestock Standards Committee member, Canada)

I would split out when improvements are needed and records as a and b for easier reference to what exactly needs to be improved based on a non-compliance

Standard Committee´s response

The Standard Committee agrees.

7.1.5. Artificial light:

a. The maximum number of hours of artificial light used to prolong natural day length shall reflect the natural photoperiod of the species and stage of development and not adversely affect the natural behavior, and general health of the invertebrates.
b. Lighting shall not produce a stroboscopic effect (e.g. fluorescent light).

Comment from Joel Aitken (Organic Inspector and COR Livestock Standards Committee member, Canada)

Split out "Lighting shall not produce a stroboscopic effect (e.g. fluorescent light)." into an a.

Standard Committee´s response

The Standard Committee agrees.

Article 7.1.5 to split as follows:

7.1.5 Artificial light:

a) The maximum number of hours of artificial light used to prolong natural day length shall reflect the natural photoperiod of the species and stage of development and not adversely affect the natural behavior, and general health of the invertebrates.
b) Lighting shall not produce a stroboscopic effect (e.g., fluorescent light).

Comment from John Foster (Wolf and Associates, US)

We suggest 7.1.5. to read: The maximum number of hours of artificial light used to prolong natural day length shall reflect the natural photoperiod of the species appropriate and adjusted to the geographic location and stage of development and not adversely affect the natural behavior, and general health of the invertebrates. Lighting shall not produce a stroboscopic effect (e.g. fluorescent light).

Standard Committee´s response

We will add after “natural photoperiod of species”, appropriate and adjusted to the geographic location.

7.1.6. Construction material, equipment, structural or furnishing elements, bedding materials, and substrate that come into contact with the invertebrates shall meet the following requirements:

a. materials or substances consumed by the invertebrates shall meet the invertebrate nutrition requirements in section 7.3;
b. materials or substances that are regularly disposed of (such as substrate) shall be composed of substances allowed in Appendix 2 of this standard and may also be paper/wood products not containing contaminants such as toxic glues or glossy or colored inks, synthetic fungicide, preservative, fumigant, or nanomaterials;
c. materials or structural elements which are re-used and not usually disposed of must not be made from materials with toxic or potentially toxic effects on the species raised or on human health. They should consist of natural or food grade materials.

Comment from David Gould (Food Chain, US)

Revise part b to read: "materials or substances that are regularly disposed of (such as substrate) shall be composed of organically produced agricultural products or substances allowed in Appendix 2 of this standard and may also be paper/wood products not containing contaminants such as toxic glues or glossy or colored inks, synthetic fungicide, preservative, fumigant, or nanomaterials;"

Standard Committee´s response

The Standard Committee agrees.

Comment from Joel Aitken (Organic Inspector and COR Livestock Standards Committee member, Canada)

I find the consumed / regularly disposed / structural distinctions here to be clear and very useful for inspection and producers.

Standard Committee´s response

(No response is required)

Comment from Jim Pierce (POTCom, Fiji)

7.1.6.b Prohibiting Glossy ink can be difficult to enforce. Better if the requirement is "ink from vegetable sources only" Are all glues toxic? Need further explanation or all corrugated cardboard would be prohibited?

Standard Committee´s response

We will change it into shall.

Comment from Brian Baker (Belcairn Concerns, US)

Far too detailed and prescriptive. Suggest making it consistent with §5.8.3 of the apiculture standards.

Standard Committee´s response

5.8.3 are materials for the hive, for invertebrates we talk about materials that are regularly disposed of. No change is required.

Comment from Stefan Goldfinch

7.1.6c Re-wording of should into shall: materials or structural elements which are re-used and not usually disposed of must not be made from materials with toxic or potentially toxic effects on the species raised or on human health. They shall consist of natural or food grade materials.

Standard Committee´s response

We will change it to "shall".

7.1.7 Operators shall manage pests and diseases in invertebrate housing using only the following methods:

a. regular inspection of batches and production unit(s) to ensure early detection of sanitary issues;

b. regular cleaning and disinfection between batches of the facility and equipment using only methods and substances permitted in this standard;

c. preventive actions such as disruption, proper elimination of contaminated material, removal of individuals or batches, habitat management and impeding access to facilities;c. preventive actions such as disruption, proper elimination of contaminated material, removal of individuals or batches, habitat management and impeding access to facilities;

d. mechanical, physical and biological methods, including UV treatment;

e. substances (other than pesticides) used in traps;

f. substances permitted for pest management in bees and in the Appendices of this standard.

Comment from (David Gould, Food Chain, US)

Revise part b to say "regular cleaning and disinfection of the facility and equipment between batches using only methods and substances permitted in this standard;"

Standard Committee´s response

We have rephrased as follows:

<< b. regular cleaning and disinfection of the facility and equipment between batches using only methods and substances permitted in this standard;>>

Comment from Jim Pierce (POTCom, Fiji)

The clear integrated approach is appreciated.

Standard Committee´s response

(No response is required)

Comment from Fiona Marty (FNAB, France)

2 elements shall be added at the top of the list :
- the prevention methods : such as the limitation of the size of the farm and the limitation of the density of individuals under a same facility/in a same batch;
- the facilities and the outsiderun (when applicable) shall be left empty during a relevant period between two batches of production. During that period, the premices can be cleaned and desinfected. But cleaning and desinfection are not sufficent and shall not replace this empty period.

Standard Committee´s response

The point C to read as follows:

c. Preventive actions such as disruption, proper elimination of contaminated material, removal of individuals or batches, habitat management, appropriate stocking densities, fallow periods, and impeding access to facilities;

Comment from John Foster (Wolf and Associates, US)

We suggest for a. regular inspection of batches and production unit(s) to sufficient to ensure early detection of sanitary issues.
We suggest for e. substances (other than pesticides) allowed in the Appendices of this standard used in traps.

Standard Committee´s response

We have rephrased as follows:

<< b. regular cleaning and disinfection of the facility and equipment between batches using only methods and substances permitted in this standard;>>

Allowed substances (for traps) may be checked in the Appendixes.

Comment from Brian Baker (Belcairn Concerns, US)

Suggest making consistent with §5.8.7 and 5.8.8 of the apiculture standards.

Standard Committee´s response

7.1.7 says:
e. substances (other than pesticides) used in traps;
f. substances permitted for pest management in bees and in the Appendices of this standard.

With this wording we are consistent with the apiculture standards .

Regional or other exception

Other products may be used if required by law for the control of notifiable diseases.

7.1.8. Synthetic allopathic veterinary drugs, antibiotics, hormones and pupation inhibitors are prohibited in organic invertebrates' production. Only substances listed in the Appendices and requirement 5.8.7 of this standard, as well as phyto-therapeutic and homeopathic treatments, are permitted in the management of pests and diseases on the organic invertebrates' unit of production.

Comment from David Gould (Food Chain, US)

The first sentence needs a subtle grammatical correction; revise to say: "7.1.8. Synthetic allopathic veterinary drugs, antibiotics, hormones and pupation inhibitors are prohibited in organic invertebrate production."

Standard Committee´s response

The Standard Committee agrees. It will change to "7.1.8. Synthetic allopathic veterinary drugs, antibiotics, hormones, and pupation inhibitors are prohibited in organic invertebrate production."

Comment from Brian Baker, Belcairn Concerns, US

Incorporate into the existing apiculture standards.

Standard Committee´s response

The apiculture standard is not under the revision right now. We cannot integrate it at this moment.

Comment from David Gould (Food Chain, US)

Revise part b to say: "invertebrates are regularly monitored throughout their production cycle."

Standard Committee´s response

We will incorporate: <<invertebrates are regularly monitored throughout their production cycle.>>

Comment from John Foster, Wolf and Associates, US

For b. invertebrates are regularly monitored to sufficiently ensure their well-being.

Standard Committee´s response

We do not monitor regularly only to ensure the well being.

7.1.10. The management, facilities and accommodation facilities shall be designed to prevent the escape of living invertebrates at any stage of development into local natural habitats.

Comment from David Gould (Food Chain, US)

Revise to say: "The management, facilities and accommodation facilities shall be designed to prevent the escape of living invertebrates at any stage of development into local natural habitats where they not already indigenously present or in an way that upsets the natural ecosystem balance."

Standard Committee´s response

During the first round of consultations, we agreed with other comments to extend this paragraph to all species. The prevention of escape should be done not only because of the possible invasion from alien species but because of sanitary issues too. (virus, bacteria and fungi transmission to wild local insects)

Comment from Jim Pierce (POETCom, Fiji) Need a risk-based decision if escape would cause significant environmental, social etc. impact
Standard Committee´s response Please, see the response above

7.1.11. Mutilations of living invertebrates such as the trimming of wings or removing of legs are prohibited.

Comment from Brian Baker (Belcairn Concerns US) Redundant to 5.8.12.
Standard Committee´s response We will leave it as it is. It is not redundant as it was designed as a standalone standard.

7.1.12. Extraction of slime from live snails shall be done through non-invasive methods that do not harm the snails.

Comment from John Foster (Wolf and Associates, US) Extraction of slime from live snails shall be done through non-invasive methods <u>such as, but not limited to (add examples of non-invasive methods) that do not harm the snails.</u>

Standard Committee´s response

Further detail may be added in a later revision.

7.1.13. The method of killing shall ensure rapid death and minimize animal suffering.

7.1.14. Cannibalism shall be minimized by appropriate measures.

Comment from Jim Pierce (POETCom, Fiji)

Redundant to 7.1.3

Standard Committee´s response

This reference is needed in both. 7.1.3 gives examples of animal welfare. 7.1.14 is more specific.

Comment from John Foster (Wolf and Associates, US)

Cannibalism shall be minimized by appropriate measures according to species and found in the Appendices

Standard Committee´s response

Please, see the response to 7.1.12.

Comment from Brian Baker (Belcairn Concerns, US)

Suggest deleting this requirement.

Standard Committee´s response
If the comment relates to the suggestion of incorporating the invertabrates standard into the beekeeping stand, we reject it.

7.1.15. Waste, including organisms, from organic invertebrate production units shall be handled and disposed of in a way that does not negatively impact the environment.

Comment from Joel Aitken (Organic Inspector and COR Livestock Standards Committee member, Canada)

Add when possible / appropriate incorporated into organic crop production systems for nutrient cycling.

Standard Committee´s response

The standard is at its infant stage. We should not overregulate now.

Comment from Stefan Goldfinch

Rewording

Waste, including organisms, from organic invertebrate production units shall be handled and disposed of sustainably and that does not negatively impact the environment eg composting.

Standard Committee´s response

It is not clear what is sustainable disposal. It is not part of the standard hence we reject it.

7.1.16. Species being produced outdoors must move or forage only in organic or untreated land. The natural movement of the species must be evaluated, and the potential area where the species potentially moves or forages must be only organic or untreated land.

Comment from David Gould (Food Chain, US)

Simplify to say: "Species being produced outdoors must be allowed to move or forage only in organic or untreated land."

Standard Committee´s response

We will take out 7.1.16. because of conflicting paragraphs. See the comment below.

Comment from Stefan Goldfinch

Rephrase into:
7.1.16. Species being produced outdoors must move or forage only in organic land. The natural movement of the species must be evaluated, and the area where the species moves or forages must be organic land.

Conflicts with 7.2.1 to have non certified land. This is not wild harvest. It is farmed invertebrates, thus must be cert organic units/land.

Standard Committee´s response

We will take out 7.1.16 because of conflicting paragraphs.

7.2. Origin and Conversion periods

General Principle

Organic invertebrates are born and raised on organic production units. Production systems that change from conventional to organic production require a conversion period.

Comment from Brian Baker (Belcairn Concerns, US)

Suggest deleting the above part on the general principle

Standard Committee´s response

The Standard Committee rejects this suggestion.

Requirements:

7.2.1. All invertebrate requirements in this standard shall be met for the duration of the conversion period before the resulting product can be considered as organic. Where invertebrates are raised on living plants or soil, the plants shall be organic and the land shall comply with land conversion requirements.

Comment from Stefan Goldfinch

Rephrase into:

All invertebrate requirements in this standard shall be met for the duration of the conversion period before the resulting product can be considered as organic. Where invertebrates are raised on living plants or soil, the soil and the plants shall be certified organic.

Standard Committee´s response

We reject this suggestion as our wording is consistent with other standards in IFOAM Norms

7.2.2. Invertebrates and products derived from them are considered organic only if the parental generation has been organically managed prior to the beginning of its reproductive stage.

7.2.3 Parallel production of invertebrates is allowed only when organic and non-organic units are physically, financially and operationally separated.

Comment from Brian Baker (Belcairn Concerns, US) Redundant to 3.1. Suggest deleting
Standard Committee´s response We keep it as it is

Comment from Stefan Goldfinch Financial separation is not required in any other parallel situations. Also not practical to induce conversion.
Standard Committee´s response Even if not required in other parallel production situations, financial separation allows for effective inspection.

7.3. Invertebrate nutrition

General Principle

Organic invertebrates receive their nutritional needs from organic feed.

Comment from Fiona Marty (FNAB, France)

Again : need to add a provision on the production of the feed at the farm level with farm surfaces.

Standard Committee´s response

General principle under animal husbandry says that organic animals receive organic feed. As organic invertebrates is a new sector we do not want to be too restrictive and hinder its development.

Comment from IPIFF/Naturland/AFFIA (joint response)

We call on an amendment on to the article 7.3. Invertebrate nutrition which mentions as a 'General Principle' that Organic invertebrates receive their nutritional needs from organic feed.
The following reasons are behind this request:

- there is a severe lack of organically certified inputs that may be used in insect farming;
- the availability of such inputs (e.g. fruit and vegetable by-products, co-products derived from grains or cereals, etc) depends considerably on seasonality. Thus, due to such shortages, the vast majority of the operators will not be in a position to supply insect-derived outputs throughout the year (making organic certification unattractive from a business point of view), as they will only be able to conduct their organic production activities whenever such seasonal inputs will be available.

Therefore, IPIFF, Naturland and AFFIA strongly encourage the IFOAM Standard Committee to take into account an approach that would allow insect producers to make a bolder contribution to the development of the organic sector (e.g. by providing much-needed organic-certified feed ingredients or organically-certified fertilising products).

Such an approach could be based on a list of priorities regarding the inputs used in organic insect production (e.g. such as in the case of organic aquaculture carnivorous feed in the European Union – *see Article 3.1.3.3. Specific rules on feed for carnivorous aquaculture animals, Regulation (EU) 2018/848*), that would make organic insect production more resilient whenever 100% organically-certified inputs will not be available:

- a. inputs derived from organic value chains (e.g. organic agri-food co-/by-products, organic former foodstuffs, etc.);

- b. organic feed;

- c. in-conversion or conventional inputs derived from local agri-food value chains (e.g. by-products, former foodstuffs, etc) ;

- d. others.

We believe such a rationale would allow national authorities to develop tailored organic certification standards, taking into account the regional context and the current market realities.

Standard Committee´s response

The SC agreed that organic feed is a non-negotiable condition for the organic certification of the product. Anything else would be a paradigm change from the rules hitherto applied. In case of temporary shortages, we could allow provisional suspension of the organic status. Resumption of organic management could then be possible without having to pass an additional conversion period.

Requirements:

7.3.1. Organic invertebrates shall be fed organic feed unless the radius of movement of the species is such that the individuals collected can be assured to have foraged on organic land or on land that has not been treated or contaminated by prohibited substances (cf. 7.1.16). Organic invertebrates may be fed with vitamins, trace elements and supplements only from natural sources.

Comment from Claire Lataste (Biocaledonia Association)

2 comments:

1/ One of the greatest interest of terrestrial invertebrates is to reduce waste. We know there is already great competition to access organic waste everywhere, from plants or from animals, to use as fertilizers in soils. Organic farmers keep their waste to use it for their soils. So, in most region of the world, we tolerate in organic farming the use of organic matter coming from conventional farming, it's a permanent exemption. Terrestrial invertebrate is a great opportunity to reduce the carbon footprint of organic husbandry.

However, if we impose invertebrates to be fed with organic waste, we will never develop this solution for organics.

2/ I understand that there is absolutely no restriction on feeding invertebrates with waste from animals, while, as far as I know, studies haven't concluded yet on the potential risk to feed animals with invertebrates fed with animals wastes. It might be dangerous.

Standard Committee´s response

This is an important point but not directly relevant to the objective of creating a standard for organic invertebrates standard for feed and food. Also, see the comment below.

Comment from Jim Pierce, POETCOm, Fiji

See comments in Overall comments: Propose a split for feed as opposed food. Allow non-organic contaminant free waste similar to compost feedstock. For the Regional exception we agree with the exception but suggest adding a time limitation.

Standard Committee´s response

We reject this proposal.

Comment from Andrew Richardson, InnovaFeed SAS, France

The requirement for 100% organic feed for an organic insect removes the possibility for insects to have an impact on the animal feed space. Animal feeds are currently the market space where insects can have the most positive value, supporting strong nutriton, marine biodiversity, reducing farming co2 impact etc.
In order to have this impact, insects need to be produced at an industrial scale. This means the consumption of at least 100kT of substrate a year (est. based on InnovaFeed's first industrial scale facility in France) - producing ~15kT BSF protein. In 2017, France (our current area of operation) produced a total of 75kT applicable substrate for InnovaFeed's insect facility (Source "Un ancrage dans les territoires et une croissance soutenue" - June 2019). This means InnovaFeed would require importing at least 25kT substrate year even if we consumed 100% of the national production of suitable organic substrate.
Producing at high volume is essential for economic sustainability, and to ensure any impact on global industries such as animal feed. It is our hope that insects can be used to support the organic areas of this industries but given the current context it looks like an impossible feat.

The insect is great at upcycling low-value nutrients, co-products of industries that are either poorly valorised or ill-used in their current format. Given the relatively small amount of organic co-product ingredients on the market place, insects cant exercise this core value proposition.
Our request would be that if a producer can prove that they can source local, high quality non organic feed for their insects - whilst at the same time not being able to source organic feedstock from within their national geography - that here is an exemption for the necessity for organic feedstock.

Standard Committee´s response

We reject the porposal. The 100% organic feed requirement would likely have a greater impact on developing organic agriculture because more organic products will be produced and be part of the supply chain. By allowing non-organic feed we would be diluting the impact of the standard.

Comment from Stefan Goldfinch

Suggest rephrasing into: Organic invertebrates shall be fed organic feed or can be assured to have foraged on organic land (cf. 7.1.16).

Organic invertebrates may be supplemented with vitamins, trace elements and supplements (such as? What is in mind?) from natural sources where it is indicated by reference to published evidence.

Standard Committee´s response

The proposed changes do not improve the readability of the standard and are more restrictive. We will keep it in line with livestock standards and leave it as it was for consistency.

Comment from Brian Baker (Belcairn Concerns, US)

Make consistent with the apiculture standards to the degree possible. The IFOAM apiculture nutrition / feed / foraging standards are virtually impossible to meet in North America and should be revisited.

Standard Committee´s response

The only way to improve the accessibility of the apiculture standard would be to allow foraging on conventional/uncontaminated feed sources. I believe that is a no-go.

7.3.2 The invertebrates shall be offered a diet that provides all of the nutritional needs of the animals at the various stages of their development, in a form allowing them to exhibit their natural feeding and digestive behavior.

Comment from Joel Aitken, Organic Inspector and COR Livestock Standards Committee member, Canada

Replace animals with invertebrates for consistency

Standard Committee´s response

We will rephrase into:

7.3.2 The invertebrates shall be offered a diet that provides all of their nutritional needs at the various stages of their development~~,~~ in a form allowing them to exhibit their natural feeding and digestive behavior.

Comment from Brian Baker (Belcairn Concerns, US)

Suggest deleting.

Standard Committee´s response

See the decision above.

Comment from Stephan Goldfinch

Suggest rephrasing:

Invertebrates' diet shall provide all of the nutritional needs of the animals at the various stages of their development, in a form allowing them to exhibit their natural feeding and digestive behavior.

Standard Committee´s response

The standard does not become more comprehensible or accurate with the proposed changes.

7.3.3 The feed shall predominantly come from regional sources.

Comment from John Foster, Wolf and Associates, US

For 7.3.3: add the word 'organic' so: The organic feed shall predominantly come from regional sources.

Standard Committee´s response

The proposed phrasing suggests that non-organic feed can come from non-regional sources.

Comment from Brian Baker, Belcairn Concerns, US

What is a region? Is North America a region? North America? This is not parallel to the requirement of 5.5.3. It is vague and unenforceable.

Suggest deleting.

Standard Committee´s response
Even though “regional” is not a defined area, the intent of the standard is clear and allows the inspector latitude to decide on conformity.

Comment from Stephan Goldfinch

Suggest adding “local” to regional sources, to read:

7.3.3 The feed shall predominantly come from local regional sources.

Standard Committee´s response

Using the term “local” would be very restrictive and contradictory.

Regional exception

Exceptions may be permitted if the operator can demonstrate that the feed is not available locally in sufficient quantity or quality.

Comment from Brian Baker (Belcairn Concerns, US)

Suggest deleting.

Standard Committee´s response

We will leave it for consistency, even if repetitive with animal husbandry.

7.3.4 The following feed and feed ingredients are prohibited:
a. Invertebrates or invertebrate by-products of the same species offered as a component of the feed regime.

Comment from Brian Baker, Belcairn Concerns, US Consider making an exception to 5.5.5(c) for annelids, insects, and other phylae that eat manure. Suggest deleting
Standard Committee´s response The standard refers to feeding invertebrates or their by-products to invertebrates of the same species. Not in general for those that eat manure. We reject the proposal.

7.3.5 Additives and processing aids listed in this standard are permitted.

Comment from Brian Baker, Belcairn Concerns, US Suggest deleting
Standard Committee´s response We reject this proposal.

Comment from Stephan Goldfinch Why? For what purposes?
We reject the proposal. All susbstances are listed in the Appendix 4