

The
IFOAM STANDARD for
ORGANIC PRODUCTION
and **PROCESSING**
Version 2010 – Draft version 0.1.

Compilation of comments
and responses from the IFOAM
Standard Committee

*Comments received during the consultation period February –
March 2011.*

Responses prepared during the period April-August 2011

General comments

Comment Gunnar Rundgren, Grolink AB: "*The IFOAM Standard is intended to be an internationally applicable organic standard...*". This is where the problem starts. The earlier IBS was supposed to be a tool for differentiating organic from non-organic. With the fragmentation of the OGS, the IFOAM certification standard suddenly becomes a tool for something that now is profiled as a differentiation tool IFOAM Accreditation. This standard will in some sense be "higher" than the requirements in the COROS. This is a total recipe for confusion about what IFOAM's position is in standard issues. Not to speak about which confusion it will have in the market place. It would be more logical that IFOAM accreditation was based on a standard that is in line with COROS and that any IFOAM standard would be put on that level and not adding requirements not asked for in the COROS. The IBS was very good to protect and support organic sectors in developing countries, this one will only keep people out. An IFOAM standard should also be useful for PGS, self assessments and others. It is normal practise NOT to include conformity assessment methods etc in a standard. Therefore all references to Certification should be taken out of the standard. I deleted them here and there, but there might be more. Ultimately, the starting point of the standard is wrong and therefore the end result will never be good. The ITF concluded that it is neither desirable nor feasible to make a global certification standard, and IFOAM has in no way showed how this assessment was wrong. Both the standards themselves and the text from the Committee shows a lot of consideration of the situation in the US and the EU, but little consideration for the rest of the world. The standard looks like an EU-US trade deal rather than something that cares for organic development in the whole world.

Response: It is true that IFOAM's ideal vision is regionally adapted organic standards all recognized as equivalent when it comes to allowing organic trade, through the IFOAM Family of Standards. However, the situation is, and will long remain, very far from the ideal. The reality is that a handful of standards developed with only Northern interests in mind are dominating the trade and being applied globally. Having a standard that is developed with a global perspective, even though it makes it imprecise on many aspects, and leaves a larger responsibility to the CBs, is not such a bad option in the meantime. It is also true that the standard pays a lot of attention to the North American and EU regulations, as we do not want to ruin the chances to obtain equivalence to these at some point. In addition, the IFOAM Standard replaces the IBS in its role of providing a global platform for discussing detailed standard requirements (which is not possible under the COROS). It is true that many requirements are site-specific but also many others are not and could really be harmonized and improved by looking at how others have written them. That IFOAM is doing this work will help all standard setters, even those who want to develop regional standards. The IFOAM Standards is conceived as a service for people that feel that common standards development saves time and IFOAM would facilitate their process.

Comment Angela Escosteguy, Brazil: General consideration: It should be avoided as much as possible to put decisions in the hands of certification bodies - both third part and participative. We must not forget that they have a commercial interest and this can influence the approval or the rejection of a charge that is ready to be

commercialized. If in doubt, I fear that the decision does not benefit the interests of consumers. Variations of interpretation and orientation can affect the quality assurance of final product, may difficult the protection of the consumer, may be unfair to the producers who work more closely and carefully and also may complicate the equivalence between the laws to regulate trade between countries. The more clear and detailed a rule, better for those who produce, who oversees and for those who consume.

Response: in general we agree that whenever a requirement can be made clear and precise, this should be done to reduce variations in interpretation. However, as this is a global standard, there are many requirements that cannot be brought to a very prescriptive level of detail: this would likely make them inapplicable or counter-productive in various regions of the world. This standard must find the balance.

Comment Victor Gonzalvez, SEAE: We support the document as it's written.

THE PRINCIPLES OF ORGANIC AGRICULTURE

Preamble

These Principles are the roots from which organic agriculture grows and develops. They express the contribution that organic agriculture can make to the world, and a vision to improve all agriculture in a global context.

Agriculture is one of humankind's most basic activities because all people need to nourish themselves daily. History, culture and community values are embedded in agriculture. The Principles apply to agriculture in the broadest sense, including the way people tend soils, water, plants and animals in order to produce, prepare and distribute food and other goods. They concern the way people interact with living landscapes, relate to one another and shape the legacy of future generations.

The Principles of Organic Agriculture serve to inspire the organic movement in its full diversity. They guide IFOAMs development of positions, programs and standards. Furthermore, they are presented with a vision of their world-wide adoption.

Organic agriculture is based on:

- The Principle of Health
- The Principle of Ecology
- The Principle of Fairness
- The Principle of Care

Each principle is articulated through a statement followed by an explanation. The principles are to be used as a whole. They are composed as ethical principles to inspire action.

Comment: David Eboku suggested a number of edits to this preamble section.

Comment: Anton Pinschof suggested a number of edits to this preamble section.

Response: the text of this whole chapter cannot be changed as it is the text of The Principles of Organic Agriculture as adopted by the IFOAM General Assembly.

The Principle of Health

Organic Agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.

This principle points out that the health of individuals and communities cannot be separated from the health of ecosystems - healthy soils produce healthy crops that foster the health of animals and people.

Health is the wholeness and integrity of living systems. It is not simply the absence of illness, but the maintenance of physical, mental, social and ecological well-being. Immunity, resilience and regeneration are key characteristics of health.

The role of organic agriculture, whether in farming, processing, distribution, or consumption, is to sustain and enhance the health of ecosystems and organisms from the smallest in the soil to human beings. In particular, organic agriculture is intended to produce high quality, nutritious food that contributes to preventive health care and well-being. In view of this it should avoid the use of fertilizers, pesticides, animal drugs and food additives that may have adverse health effects.

The Principle of Ecology

Organic Agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them.

This principle roots organic agriculture within living ecological systems. It states that production is to be based on ecological processes, and recycling. Nourishment and well-being are achieved through the ecology of the specific production environment. For example, in the case of crops this is the living soil; for animals it is the farm ecosystem; for fish and marine organisms, the aquatic environment.

Organic farming, pastoral and wild harvest systems should fit the cycles and ecological balances in nature. These cycles are universal but their operation is site-specific. Organic management must be adapted to local conditions, ecology, culture and scale. Inputs should be reduced by reuse, recycling and efficient management of materials and energy in order to maintain and improve environmental quality and conserve resources.

Organic agriculture should attain ecological balance through the design of farming systems, establishment of habitats and maintenance of genetic and agricultural diversity. Those who produce, process, trade, or consume organic products should protect and benefit the common environment including landscapes, climate, habitats, biodiversity, air and water.

The Principle of Fairness

Organic Agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities.

Fairness is characterized by equity, respect, justice and stewardship of the shared world; both among people and in their relations to other living beings.

This principle emphasizes that those involved in organic agriculture should conduct human relationships in a manner that ensures fairness at all levels and to all parties – farmers, workers, processors, distributors, traders and consumers. Organic agriculture should provide everyone involved with a good quality of life, and contribute to food sovereignty and reduction of poverty. It aims to produce a sufficient supply of good quality food and other products.

This principle insists that animals should be provided with the conditions and opportunities of life that accord with their physiology, natural behavior and well-being.

Natural and environmental resources that are used for production and consumption should be managed in a way that is socially and ecologically just and should be held in trust for future generations. Fairness requires systems of production, distribution and trade that are open and equitable and account for real environmental and social costs.

The Principle of Care

Organic Agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.

Organic agriculture is a living and dynamic system that responds to internal and external demands and conditions. Practitioners of organic agriculture can enhance efficiency and increase productivity, but this should not be at the risk of jeopardizing health and well-being. Consequently, new technologies need to be assessed and existing methods reviewed. Given the incomplete understanding of ecosystems and agriculture, care must be taken.

This principle states that precaution and responsibility are the key concerns in management, development and technology choices in organic agriculture. Science is necessary to ensure that organic agriculture is healthy, safe and ecologically sound. However, scientific knowledge alone is not sufficient. Practical experience, accumulated wisdom and traditional and indigenous knowledge offer valid solutions, tested by time. Organic agriculture should prevent significant risks by adopting appropriate technologies and rejecting unpredictable ones, such as genetic engineering. Decisions should reflect the values and needs of all who might be affected, through transparent and participatory processes.

SECTION A - GENERAL

Scope of the IFOAM Standard

Organic agriculture [also known as “Biological” or “Ecological” agriculture or protected equivalent terms (in other languages)] is a whole system approach based upon a set of processes resulting in a sustainable ecosystem, safe food, good nutrition, animal welfare and social justice. Organic production therefore is more than a system of production that includes or excludes certain inputs. IFOAM defines organic agriculture as “a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved”.

The IFOAM Standard (IS) is an internationally applicable organic standard developed by IFOAM. It is a good, practical interpretation of the IFOAM Standards Requirements (Common Objectives and Requirements of Organic Standards), hence belongs to the IFOAM Family of Standards. IFOAM recognizes the need to harmonize organic standards worldwide whenever possible, but also the need to have organic standards that are regionally adapted. The IFOAM Standard is an off-the-shelf standard which can be used by those wanting to outsource standard setting and maintenance and see the benefits of sharing the work with others and creating synergies on an international level. The IFOAM standard contains provisions for regional variations, in the form of regional or other exceptions at the discretion of the certification bodies.

Comment David Eboku: replace “at the discretion of the certification bodies” by “at the recognition or acknowledgement of the certification bodies”. The word discretion may imply choice or to say that certification bodies may not care what the opinions of promoters of such exceptions may be. Recognition of acknowledgment may be a better term.

Response: since we have agreed to remove all possible reference to certification, we will simply leave “regional or other exception” as titles for these boxes. We will explain in further details in this section how these exceptions are to be handled in the case of the IFOAM Accreditation Program.

The IFOAM Standard covers the areas of general organic management, crop production (including plant breeding), animal production (including beekeeping), aquaculture, wild collection, food processing and handling, labeling, and social justice.

Comment David Eboku: remove “food” in “food processing”. Some organic goods are not food.

Response: agreed.

Relevance to the IFOAM Accreditation and to International Reference

The IFOAM Standards and the IFOAM Accreditation Requirements (IAR) are used by the International Organic Accreditation Service (IOAS) in the IFOAM accreditation process for organic certification bodies. The IOAS evaluates the standards (used by the certifier) against the IFOAM Standard and certification body performance against the IFOAM Accreditation Requirements.

Comment David Eboku: rephrase to “The IOAS may also evaluate a standard”.

Response: Rejected. In the IFOAM accreditation process, these evaluations are compulsory.

All the requirements of the IFOAM Standard relevant to the certified farming or processing operations must be implemented by certification bodies in order to become IFOAM Accredited Certification Bodies (ACBs). In other words, certification bodies wishing to be IFOAM accredited must use either the IFOAM Standard itself, or a standard compliant with the IFOAM Standard.

The IFOAM Standard can also be used (against payment) by non accredited certification and standard-setting organizations as way to outsource their standard-setting activity to IFOAM. In addition, governments and any standard setters can (and are recommended to) use freely the IFOAM Standard as a reference to develop their own regulation or standard.

Comment David Eboku: replace “can also be used” by “may also be used”. Replace “any standard setters can” by “other standard setters may”.

Response: agreed.

Comment Gunnar Rundgren, Grolink AB: Standards are mainly used by operators who ask a certification body to certify against the standard. If IFOAM makes a production standard, I don't see how you will be able to charge for the use of the standard, neither legally nor practically.

Response: this is not in the scope of the committee's work to address, but belongs to the business plans elaborated by the World Board and Head Office.

Structure

Requirements in the IFOAM Standard are organized according to the following structure:

1. Definitions
2. Organic Ecosystems
3. General Requirements for Crop Production and Animal Husbandry
4. Crop Production
5. Animal Husbandry
6. Aquaculture Production Standards
7. Processing and Handling
8. Labeling
9. Social Justice

Each section contains subsections which are all organized according to a similar structure, namely a statement of the general principle applicable to that section, followed by the requirements which have to be followed by the operators. The requirements are the minimum requirements that an operation must meet to be certified organic. All of the standards applicable to the particular farm and enterprise must be met before the operation may be certified as organic.

Technical terms are explained in the section on definitions below.

Question/note from the committee: The current draft of the IFOAM Standard does not contain requirements for the operator related to record keeping, documentation, maintenance of an Organic System Plan, etc. (An organic system plan can be described as a management plan of an organic operation that has been agreed by the operator and his certifier and that includes written plans concerning all aspects of the operation relating to the standard). The IBS did not contain such requirements, and neither do the IFOAM Accreditation Criteria. Does the membership think that such requirements would be necessary in the IFOAM Standard? If yes, the committee proposes that this would be a complete new section to be developed by the committee after September 2011, in a next version of the standard.

Comment Diana Callear, Afrisco Certified Organic: Yes, I agree with this. But after year one, only the changes that have been made during the year need to be spelled out in the application for the next year's annual inspection. But it must then be accurate – changes that are discovered only in the inspection should be treated as problematic.

Comment Mike Smith,ASUREQuality Limited: As a minimum there should be documented requirement for an Organic System Plan, the requirement for a map for primary producers and a process/layout diagram for processors.

Comment Paddy Doherty: I don't think it is necessary to require a farm plan.

Comment Gunnar Rundgren, GroLink AB: There should be no record keeping requirements in the standards.

Comment Wang Yungang, OFDC: it is necessary to set some basic record keeping requirements, including written organic system plan and some records needed for trace back the production process, but not too complicated.

Comment Akiko Nicholls, Australia Certified Organic: The whole new section would not be necessary as the standard implies that the paper work needs to be maintained. This should be left open for each certification agency to decide what documents would be required to be maintained to comply with the standard.

Comment David Gould: Documentation is more a tool for certification than anything else, although good producers do keep records so they know more accurately what they have done over time. It makes sense to have a section on this, but I don't see it as being critical, unless the IFOAM Standard is to be a stand-alone document used by market-controlled regimes. Otherwise, other regulations in force will cover this. It wouldn't be too difficult to create such a section though.

Comment FiBL and Demeter Switzerland: There might be a small section on record keeping but not over-prescriptive, in particular with regard to developing countries. The details should be left to the Standard setting organisations /institutions, e.g like Codex Alimentarius. See Codex Guidelines Record keeping and identification 53. The operator should maintain detailed and up-to-date records as set out in Annex 3, paras 7–15 .

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): Guidance and sample templates would be helpful rather than standards. Guidance for certification programs could also be helpful, especially to guide programs away from pass/fail systems to systems that require continual improvement.

Comment Christian Pein, Gäa e.V.: No necessity to include such requirements in the standard, as is part of the inspection and contractual agreements anyway.

Comment NASAA: Yes minimum records should be included in the IFOAM Standard – these should not be the maximum records but minimum, and allow for regional flexibilities.

Comment ICS: We would agree standards for record keeping need to be established

Response: from the comments we note that there are diverging opinions on this. It looks like that some members would appreciate guidance in this area but that such guidance may not need to be included in this standard. Therefore, the committee will not take up this issue for the moment. In the future, the committee could perhaps work on developing guidelines on what should be in an organic system plan.

SECTION B – DEFINITIONS, PRINCIPLES, RECOMMENDATIONS AND STANDARDS

1. DEFINITIONS

Comment David Eboku: general comment on this section: in a number of cases it would appear that the definitions are biased towards certified organic production a situation usually common when CBs make definitions. My opinion would be to keep generic definitions which would apply in the text of the standard. The word certified should not appear at all in the whole text. My suggestion is to stick to the fact that organic agriculture is a system of production. Certification is a pronouncement by a third party that the system has been achieved. It does not mean that when production has not been certified it is not organic. The nature of ISO standards text which are used for certification worldwide is a good example to write the text without referring to certification. The standards should establish the requirements and when these are fulfilled, the compliance to the standards is established and may be witnessed through certification (first, second or third party). It would then be better to say organically produced instead of certified organic and then to realize that there may be cases where organically produced materials are not available and to provide a derogation e.g 'where the organically produced materials are not available, other materials may be used provided.....'.

Response: we agree to remove reference to certification whenever possible in this document. We shall also clarify in the General section that the exceptions are to be the judgment of a third party (which could be the certifier, the government, a PGS, etc.).

Aquaculture: The managed production of aquatic plants and/or animals in fresh, brackish or salt water in a circumscribed environment.

Comment David Eboku: replace to “circumscribed (demarcated) environment.

Response: accepted.

Ayurvedic: Traditional Indian system of medicine.

Biodiversity: The variety of life forms and ecosystem types on Earth. Includes genetic diversity (i.e. diversity within species), species diversity (i.e. the number and variety of species) and ecosystem diversity (total number of ecosystem types).

Comment Anton Pinschhof for FNAB and FRAB: add at the end “as well as the dynamic effects they engender”.

Response: agreed.

Breeding: Selection of plants or animals to reproduce and / or to further develop desired characteristics in succeeding generations.

Buffer Zone: A clearly defined and identifiable boundary area bordering an organic production site that is established to limit application of, or contact with, prohibited substances from an adjacent area.

Certification Body: The body that conducts certification, as distinct from standard-setting and inspection.

Comment David Eboku: replace to “conducts (grants) certification”.

Response: accepted.

Comment David Gould: add a definition of compost as “Compost: Decayed organic material used as a fertility amendment in agricultural production, produced by a combination of actions over time by microbes, invertebrates, temperature, and other elemental factors (e.g., moisture content, aeration). Composted material shows practically no substantive indication as to the original substrate(s) from which it was made”.

Response: accepted

Contamination: Pollution of organic product or land; or contact with any material that would render the product unsuitable for organic certification.

Comment David Eboku: [to relate to the general comment on this section] Replace “certification” by “status”: a product, may be organic even when not certified and contamination could still affect the product.

Response: We shall rephrase the definition to “Contact of organic product or land with a substance prohibited for organic production or handling.” The committee confirms that GMOs would be considered a substance in the context of this definition.

Conventional: Conventional means any material, production or processing practice that is not certified organic or organic “in-conversion”.

Comment David Eboku: [to relate to the general comment on this section] delete “certified” in this definition.

Response: accepted.

Comment Anton Pinschhof for FNAB and FRAB: add at the end “(see also “Industrial”).

Response: see response below to the suggestion to add a definition of “industrial”.

Conversion Period: The time between the start of the organic management and the certification of crops and animal husbandry as organic.

Comment David Eboku: [to relate to the general comment on this section]: replace “certification” by “recognition”.

Response: We find that “recognition” is too weak and will replace “certification” by “acceptance”.

Crop Rotation: The practice of alternating the species or families of annual and/or biennial crops grown on a specific field in a planned pattern or sequence to break weed, pest and disease cycles and to maintain or improve soil fertility and organic matter content.

Culture: A microorganism, tissue, or organ, growing on or in a medium.

Comment David Eboku: “Microorganisms” (plural)

Response: accepted.

Direct Source Organism: The specific plant, animal, or microbe that produces a given input or ingredient, or which gives rise to a secondary or indirect organism that produces an input or ingredient.

Disinfect: To reduce, by physical or chemical means, the number of potentially harmful microorganisms in the environment, to a level that does not compromise food safety or suitability.

Exception: Permission granted to an operator by a certification body to be excluded from the need to comply with normal requirements of the standards. Exceptions are granted on the basis of clear criteria, with clear justification and for a limited time period only.

Comment David Eboku: [to relate to the general comment on this section]: This definition is biased towards CBs. There may be situations for exemption in the standard.

Response: We agree that the standard could be used by producers that are not certified by a certification body and agree to adapt the language to this situation in all possible cases. To avoid having this definition apply to all kinds of operators, we shall delete it from the definition section and move this explanation to the General Section (scope of the standard) where we describe how these exceptions are handled in the case of third party certification under the IFOAM Accreditation Program.

Comment Anton Pinschof for FNAB and FRAB: add at the end “Also sometimes known as “derogation””.

Response: see response above: will be deleted from the definition list.

Farm Unit: The total area of land under control of one farmer or a collective of farmers, including all the farming activities or enterprises.

Food Additive: An enrichment, supplement or other substance which can be added to a foodstuff to affect its keeping quality, consistency, color, taste, smell or other technical property (For full definition, see Codex Alimentarius).

Genetic Diversity: Genetic diversity means the variability among living organisms from agricultural, forest and aquatic ecosystems; this includes diversity within species and between species.

Comment David Eboku: Replace by “The variability...”

Response: accepted.

Genetic Engineering: Genetic engineering is a set of techniques from molecular biology (such as recombinant DNA) by which the genetic material of plants, animals, microorganisms, cells and other biological units are altered in ways or with results that could not be obtained by methods of natural mating and reproduction or natural recombination. Techniques of genetic engineering include, but are not limited to: recombinant DNA, cell fusion, micro and macro injection, encapsulation. Genetically

engineered organisms do not include organisms resulting from techniques such as conjugation, transduction and natural hybridization.

Comment David Eboku: Replace by “A set of techniques...”

Response: accepted.

Comment Demeter Switzerland: Demeter does not allow the protoplast and cytoplasm fusion.

Response: this Standard does not allow it either (cell fusion is considered genetic engineering in this definition). This is in accordance with the 2008 GA motion on this topic. However, we like to point out that this definition makes the standard difficult to inspect and comply with in practice, due to the impossibility to identify varieties derived from cell fusion.

Genetically Modified Organism (GMO): A plant, animal, or microbe that is transformed by genetic engineering.

Genetic Resources: Genetic resources means genetic material of actual or potential value.

Comment David Eboku: Replace by “Genetic material...”

Response: accepted.

Green Manure: A crop that is incorporated into the soil for the purpose of soil improvement. This may include spontaneous crops, plants or weeds.

Habitat: The area over which a plant or animal species naturally exists; the area where a species occurs. Also used to indicate types of habitat, e.g. seashore, riverbank, woodland, grassland.

High Conservation Value Area: Areas that have been identified as having outstanding and critical importance due to their environmental, socioeconomic, biodiversity or landscape values.

Comment David Eboku: Replace by “An area that has...its” (singular)

Response: accepted.

Comment Gunnar Rundgren, Grolink AB: identified by whom?

Response: we leave it flexible enough so that the “whom” could be the government, other certification schemes, NGOs, the certifier, depending on the local situation.

Homeopathic Treatment: Treatment of disease based on administration of remedies prepared through successive dilutions of a substance that in larger amounts produces symptoms in healthy subjects similar to those of the disease itself.

Hydroponic Systems: Crop production systems in inert media or water solutions using dissociated nutrients as prime source of nutrient supply. Growing crops in water only is not considered a hydroponic system.

Comment Anton Pinschof for FNAB and FRAB: rephrase to “media and/or water using dissociated nutrients (in suspension or solution) as prime...”.

Response: agreed.

Comment Anton Pinschof for FNAB and FRAB: add a definition of “Industrial”. The EU Regulation on Organic Agriculture also refers to “industrial” agriculture (in ... with reference to manure from industrial holdings), the term being nowhere defined except in Codex Alimentarius (...) where it is “anything not certified as Organic”.

Response: like you say, there is no technically meaningful definition of this term, which makes it very difficult to use in a standard (leave alone to define!). The term “conventional” is well defined and is the concept used in all organic standards. Therefore, we shall not add a definition of industrial agriculture and we will refrain from using that term in the standard.

Ingredient: Any substance, including a food additive, used in the manufacture or preparation of a food or present in the final product although possibly in a modified form.

Irradiation (ionizing radiation): High energy emissions from radio-nucleotides, capable of altering a product’s molecular structure for the purpose of controlling microbial contaminants, pathogens, parasites and pests in food, preserving food or inhibiting physiological processes such as sprouting or ripening, or for the purpose of inducing mutations for selection and breeding.

Label: Any written, printed or graphic representation that is present on a product, accompanies the product, or is displayed near the product.

Landless animal husbandry systems: systems by which the operator of the livestock does not manage agricultural land and/or has not established a long-term cooperation agreement with another operator managing organic agricultural land.

Comment Anton Pinschof for FNAB and FRAB: rephrase as “another operator organically managing agricultural land, whether it be for pasture, supply of feed or disposal of manure & effluent.”

Response: agreed.

Comment Afrisco: What about zero grazing with “cut and carry” of feed?

Response: this definition does not exclude zero grazing, which can be done by cutting fodder from the operator’s own land or from an organic pasture managed by another operator with whom the animal owner has established cooperation. In cases where fodder is cut from communal land, the animal owner would need to establish cooperation with other operator for disposal of manure. Grazing is regulated under 5.6.7.

Media (plural) or Medium (singular): The substance in which an organism, tissue, or organ exists.

Multiplication: The growing on of seed stock or plant material to increase supply for future planting.

Nanomaterials: substances deliberately designed, engineered and produced by human activity to be in the nanoscale range (approx 1-300 nm) because of very specific properties or compositions (e.g. shape, surface properties, or chemistry) that result only in that nanoscale. Incidental particles in the nanoscale range created during traditional food processing such as homogenization, milling, churning, and freezing, and naturally occurring particles in the nanoscale range are not intended to be included in this definition.

Operator: An individual or business enterprise, responsible for ensuring that products meet the certification requirements.

Comment David Eboku: [to relate to the general comment on this section] replace “meet the certification requirements” by “meet the requirements of an organic standard”.

Response: accepted.

Organic: “Organic” refers to the farming system and products described in the IFOAM Standard and not to “organic chemistry”.

Comment David Eboku: Replace by “The farming system... not “organic chemistry”.

Response: In fact we shall switch to defining “organic agriculture” and use the official IFOAM definition.

Comment Anton Pinschhof for FNAB and FRAB: “the farming method, system and products”.

Response: see response above.

Organic Product: A product which has been produced, processed, and/or handled in compliance with organic standards.

Organic Seed and Plant Material: Seed and planting material that is produced under certified organic management.

Parallel Production: Any production where the same unit is growing, breeding, handling or processing the same products in a certified organic system as well as a non-certified or nonorganic system. A situation with “organic” and “in conversion” production of the same product is also parallel production. Parallel production is a special instance of split production.

Comment David Eboku: [to relate to the general comment on this section] replace “in a certified organic system as well as a non-certified or nonorganic system” by “in an organic system and well as a nonorganic system”.

Response: accepted. Requirement 3.1.2 is anyway clear enough about clear and continuous separation of all product claimed as certified or certifiable as organic.

Comment David Gould: replace “the same products” by “visually indistinguishable” products.

Response: accepted.

Comment Anton Pinschhof for FNAB and FRAB: “non-organic”.

Response: agreed.

Processing Aid: Any substance or material, not including apparatus or utensils, and not consumed as a food ingredient by itself, intentionally used in the processing of raw materials, foods or its ingredients, to fulfill a certain technical purpose during treatment or processing and which may result in the non-intentional, but unavoidable presence of residues or derivatives in the final product. This includes filtration auxiliaries.

Propagation: The reproduction of plants by sexual (i.e. seed) or asexual (i.e. cuttings, root division) means.

Sanitize: To adequately treat produce or food-contact surfaces by a process that is effective in destroying or substantially reducing the numbers of vegetative cells of microorganisms of public health concern, and other undesirable microorganisms, but without adversely affecting the product or its safety for the consumer.

Soil fertility: The potential capacity of the soil to supply nutrients required for plant growth.

Soil health: Soil health is the continued capacity of the soil to function as a vital living system, within ecosystem and land use boundaries, to sustain biological productivity, maintain the quality of air and water environments and promote plant, animal and human health. Soil health is the ability of soil to perform according to its potential and changes over time due to human use and management or to unusual natural events.

Soil quality: Soil quality is the functional capacity of the soil, within ecosystem and land-use boundaries, to sustain biological productivity, maintain environmental quality and promote plant, animal and human health. Soil quality is a function of its physical and chemical properties, many of which are a function of soil organic matter content, which influence the capacity of soil to perform crop production and environmental functions, including the absence of contaminants.

Split Production: Where only part of the farm or processing unit is certified as organic. The remainder of the property can be (a) non-organic, (b) in conversion or (c) organic but not certified. Also see parallel production.

Comment David Eboku: [to relate to the general comment on this section] replace “is certified organic” by “is organic” and delete “(c) organic but not certified”. Split does not necessarily have to be about certification. When certified, it becomes certified split production.

Response: accepted. Requirement 3.1.2 is anyway clear enough about the clear and continuous separation of all product claimed as certified or certifiable as organic.

Synthetic: Manufactured by chemical and industrial processes. May include products not found in nature, or simulation of products from natural sources (but not extracted from natural raw materials).

Comment David Gould: after processes, add “or processes that result in a chemical change not induced by biological means”.

Response: agreed with the intent. This would be in line with the definition in the NOP. Most European standards do not define the term. Other standards outside the EU and US use mostly the IBS definition. We will change the definition to “A substance that is formulated or manufactured by a chemical process or by a process that chemically changes a substance extracted from a naturally occurring plant, animal or mineral source, except that such a term shall not apply to substances created by naturally occurring biological processes.”

2. ORGANIC ECOSYSTEMS

2.1 *Ecosystem Management*

General Principle

Organic farming benefits the quality of ecosystems.

Requirements

2.1.1 Operators shall design and implement measures to maintain and improve landscape and enhance biodiversity quality, by maintaining on-farm wildlife refuge habitats. Such measures may include, but are not limited to:

- a. extensive grassland such as moorlands, reed land or dry land;
- b. in general all areas which are not under rotation and are not heavily manured: extensive pastures, meadows, extensive grassland, extensive orchards, hedges, hedgerows, edges between agriculture and forest land, groups of trees and/or bushes, and forest and woodland;
- c. ecologically rich fallow land or arable land;
- d. ecologically diversified (extensive) field margins;
- e. waterways, pools, springs, ditches, floodplains, wetlands, swamps and other water rich areas which are not used for intensive agriculture or aquaculture production;
- f. areas with ruderal flora;
- g. wildlife corridors that provide linkages and connectivity to native habitat.

Comment David Eboku: replace “such measures” by “such habitats”

Response: accepted

Comment David Gould: maintain at zero is not enough. Add after habitat “or establishing them where none exist”. Replace “such measures” by “such habitats”.

Response: accepted

Question/note from the committee: Requirement 2.1.1 contains a non-exhaustive and indicative list of measures to maintain landscapes and biodiversity. Should this list remain in the standard itself or be shifted to a guidance / interpretation manual (which will be worked on after September 2011)? This is a question on which members could react more generally as there are advantages and disadvantages to having one document versus separating the standard from an interpretation manual. Do members wish to see several documents being developed or would they rather have all information into one?

Comment David Gould: It’s hard enough getting people to read one. I am in favor of fewer documents.

Comment Diana Callear, Afrisco Certified Organic: This is only a practical issue. If there are a large number of such pieces of advice running through the document, they could be put into another document. I suggest leaving them in the standards for now and evaluating that at a later stage. Secondly, I would replace “ruderal” with “wasteland” – for those without access to very good dictionaries.

Response: we will add a definition of “ruderal” in the definition section.

Comment Mike Smith, AsureQuality Limited: 2.1.1 is OK as is but a more comprehensive best practice guidance document would be really useful. The problem is that there are many ways to maintain biodiversity and most would be doing something and there is always room for improvement but it is difficult to determine compliance when the barest minimum is being practiced.

Comment Paddy Doherty: I am very happy to see these measures included in the production standard and feel that organic standards in general could do more in this area.

Comment Gunnar Rundgren, GroLink AB: It would be better that the biodiversity recommendations are further elaborate in a separate document. The standard is not about HOW to farm organically in all detail. The REQUIREMENT should be a recommendation. Biodiversity is very important and need attention, but it is in my view not mainly a standard-issue at this stage. The standard as formulated is not fulfilled by most organic farms... Delete the list of measures and phrase the recommendation as “Operators should design and implement...biodiversity quality”.

Response: we think that the requirement as it is written is not such a difficult requirement to meet, as having one or two kinds of wildlife refuge habitats on the farm (such as, but not limited to the ones listed) would be enough. Therefore, we leave it as a requirement.

Comment Wang Yungang, OFDC: want to see all information in one document, so we prefer remaining this list in the standard.

Comment Akiko Nicholls, Australia Certified Organic: This criteria is hard to measure for certification agencies and auditors. If this criteria will be “a guidance”, I suggest simply add the word “as a guide...” at the beginning of the sentence rather than creating a separate guidance document.

Comment FiBL and Demeter Switzerland: yes this list should remain and combined with an interpretation manual. We are against having too many separate documents.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): The indicative list in the standards is good.

Comment Christian Pein, Gäa e.V.: We are in favor of remaining the list within one document.

Comment NASAA: Remain in standards for the present – future guidance notes etc could still be in the one document – but that one document has several sections.

Comment ICS: One document

Response: we will leave the list in the standard for now and re-evaluate at a later stage the need to develop a separate document if and when these kind of indicative measures become numerous in the standard.

2.1.2 Clearing or destruction of High Conservation Value Areas is prohibited. Organic certification shall be denied to farming areas installed on land that has been obtained by clearing of High Conservation Value Areas in the 5 years preceding their certification application.

Comment David Eboku: the second part of the requirement is purely a certification standard.

Response: we will change the sentence to “Farming areas installed on land that has been obtained by clearing of High Conservation Value Areas in the preceding 5 years shall not be considered compliant with this standard”.

Comment IOAS: Not clear who defines what constitutes an area of high conservation value – this is an improvement on the previous standard which stated “primary ecosystems” but referring back to the definition – it does not give any indication about who does this identification.

Comment Gunnar Rundgren, Grolink AB: The reference to High Conservation Value areas is difficult as very few countries have any kind of such classifications and organic certifiers have no competency to make it, and operators even less... Also some High Conservation Value areas require maintenance, e.g. pastures. So they can be destroyed by the operator doing nothing as well as the operator plowing them.

Response: the concept of High Conservation Value Area has been defined with precise criteria internationally and in many places locally. This requirement is even included in the COROS. This requirement does not “force” farmers to maintain high conservation value pastures (unless “doing nothing” is interpreted as “destruction”) but at least it prevents the destruction of high conservation value areas for the purpose to expand organic farming, which is an important concern.

2.2 *Soil and Water Conservation*

General Principle

Organic farming methods conserve and grow soil, maintain water quality and use water efficiently and responsibly.

Comment Gunnar Rundgren, Grolink AB: do you really grow soil?

Response: we will replace “grow” by “improve the”.

Requirements

2.2.1 Operators shall take defined and appropriate measures to prevent erosion and minimize loss of topsoil. Such measures may include, but are not limited to: minimal tillage, contour plowing, crop selection, maintenance of soil plant cover and other management practices that conserve soil.

2.2.2 Land preparation by burning vegetation or crop residues is prohibited, except in cases where burning is used to suppress the spread of disease or to stimulate seed germination.

Comment IOAS: This completely eliminates slash and burn agriculture – current IBS states that burning should be restricted to the minimum. May have a considerable impact/restriction on agriculture in developing countries.

Comment Gunnar Rundgren, Grolink AB: add “or rejuvenate grass sod”.

Response: We shall rephrase the requirement to “Land preparation by burning vegetation or crop residues is prohibited” and then add a regional or other exception “Exceptions may be granted in cases where burning is used to suppress the spread of disease, to stimulate seed germination, to remove intractable residues, or other such exceptional cases.” In response to Gunnar’s comment we confirm that the case of grass sod rejuvenation is already covered under the exception as it is phrased.

2.2.3 Operators shall return nutrients, organic matter and other resources removed from the soil through harvesting by the recycling, regeneration and addition of organic materials and nutrients.

2.2.4 Grazing management shall not degrade land or pollute water resources.

Comment David Gould: change to “Grazing and/or manure management”

Response: agreed.

2.2.5 Operators shall prevent or remedy soil and water salinization.

Gunnar Rundgren, Grolink AB: add “where such forms a problem”.

Response: we will add “where these pose a problem”

2.2.6 Operators shall not deplete nor excessively exploit water resources, and shall seek to preserve water quality. They shall where possible recycle rainwater and monitor water extraction.

Question/note from the committee: Requirement 2.2.6 (“Operators shall not deplete nor excessively exploit water resources, and shall seek to preserve water quality. They shall where possible recycle rainwater and monitor water extraction.”) is quite subjective and difficult to inspect. Are there any ideas in the membership on how this requirement could be made more inspectable and still be applicable on the global level?

Comment Mike Smith, AsureQuality Limited: Very difficult to deal with on a global basis. I personally believe there are other mechanisms that provide controls. It is

useful to have the clause in and then it is at the auditors discretion on when to raise a non-conformance.

Comment Paddy Doherty: Quantity and quality are different aspects and should be dealt with in separate criteria. With quantity, the best you can do is provide examples of best practice and allow the inspector to use their common-sense to determine if best practice is feasible in certain circumstances. There are lots of places where requirements could be set regarding water quality: livestock access to streams, run-off from wash-water (dairy, produce, coffee etc). If you do not want to include a lot of extra requirements I suggest you include examples of risk for water quality so that the inspector has something to go on.

Comment Gunnar Rundgren, Grolink AB: This means that you are prohibiting organic farming in most of California, Israel, Spain etc. All of them are based on excessive exploitation of water resources. Ground water in large parts of the world is dropping with 1-3 meters per year. This is clearly not sustainable, farming must be stopped - but I don't see that we can deal with it in organic standards. Rephrase the requirement as “Operators shall seek to preserve water quality. They shall where possible and appropriate recycle rainwater and monitor water extraction.” (there is no need to recycle and monitor in moist temperate climates).

Comment Wang Yungang, OFDC: may list some examples.

Comment David Gould: Move it up to a General Principle or Recommendation. The idea is correct, but the reality is of course different. Just one example: in the geographic center of Saudi Arabia I knew some operators who were trying to farm organically as opposed to conventionally – way better all around. With only ~20mm/yr of rain and no rivers, all water came from deep wells – water from wells that were getting deeper and higher in solids over time. Without water it is absolutely desolate desert, save for very rare bursts of rain (say, once in many years) where a bloom of some flowers and low plants occurred – then back to desolation. So, was using the well water raising a risk of desertification?

Comment FiBL and Demeter Switzerland: To achieve minimized water use towards a sustainable level and with focus on environmental, social and economic impacts it is necessary to provide farmers with further developed tools that allow water accountancy and impact assessment. One approach would be to make in different climatic regions an analysis of critical points in water management of different macro-climatic regions on organic and non-organic farming systems in order to develop a monitoring system to evaluate the economic and ecologic impacts of water management systems at local level, as well as an innovative approach to use pragmatic and flexible certification schemes as positive incentive to initiate response towards sustainability. The evaluation will show how the water management assessment could be involved in routine inspections by control bodies for organic products in an innovative dynamic way. The assessment and monitoring of sustainable water use may be used for a clear communication towards clients and consumers. FiBL recommends the following change: “In regions with limited water resources, a management plan for sustainable water-use should be presented as a condition for certification. The use of non-renewable fossil water should be limited to self- sufficiency crops only.”

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): The intention of 2.2.6 is clear and good: certification programs in each country should be free to enforce appropriate measures.

Comment Christian Pein, Gäa e.V.: No experience as our farmers are obliged to use resources based on good practice anyway and they have an interest in not exploiting water due to high costs. Requirements to recycle rain water are hard to inspect.

Comment NASAA: This will require some consultation but there are many countries that have developed highly sophisticated water monitoring systems to ensure that resources are used appropriately and minimize impacts. More consultation needed before specific standards set – but could be achieved after broad consultation.

Comment ICS: We agree the operators shall not deplete the water resources

Response: Based on the complexity of the comments received, and the disagreements on the specifics, we leave the wording as it is for now, but could work on it in more depth in a future version of the standard.

2.3 *Inappropriate technologies*

Comment FiBL and Demeter Switzerland: IFOAM does not say anything on contamination traces of GMO. The rule should be explicitly stated that the processors have to avoid it, and in case of contamination the official limits would apply. In the European Union this is the EU Regulation 2018/2003/EC.

Response: contamination is regulated in a general way under section 4.6, which also applies to avoiding contamination from GMOs. However, the IFOAM position on Genetic Engineering states that “IFOAM does not support the introduction of de minimis thresholds for genetic contamination”. We do not want this standard to contradict the IFOAM position. It is obvious that if the products are to be marketed in the EU, they would need to comply with the EU limits, but there is no need to reinforce this in this standard.

Note/question from the committee: Another important topic which has been brought into the scope of this standard, as compared to the IBS, is the issue of Nanotechnology prohibition. In parallel to the development of this draft, IFOAM has been working on developing a position on “The use of nanotechnologies and nanomaterials in organic agriculture”. The membership is being consulted on this position separately. The general approach in this standard is that intentional manufacture or use of nanomaterials in organic agriculture and in organic products is prohibited, however nanomaterials will soon be used in a variety of equipment such as in windows, fridges, machinery, tools, cleaning products, etc. and it is not realistic that organic standards cover all these. The committee invites the membership to look

carefully at requirements 2.3, 7.2.2, 7.3.6, 7.3.7 and 7.5.1, and to provide their opinion as whether these requirements (especially 7.3.7 and 7.5.1) are too strict or would not be inspectable.

Comment T.A. Müller: As a consumer I would like to inform you that I most strongly support the draft IFOAM standard and IFOAM requirements presented for consultation regarding the use of nanotechnology in Organic Culture and elsewhere.

Comment David Gould: Not too strict. Inspectability is probably going to be a matter of a learning process. Affidavits from suppliers and manufacturers will serve to some extent. I believe we'll learn somewhat retrospectively how much our collective knowledge has been lacking, but even with our imperfections we can start with some process-based checking and improve as we go. Part of the issue may be that nanomaterials may not be actually named as such in some instances, and thereby slip through.

Comment Diana Callear, Afrisco Certified Organic: These look fine to me. We would presumably request statements from the maker of the packaging if there was the possibility of the use of nano technology.

Comment Mike Smith, AsureQuality Limited: Overall a logical inclusion although 7.5.1 may be difficult to verify.

Comment Paddy Doherty: The word 'appropriate' is by nature ambiguous and perhaps not the best choice for standards writing.

Response: as a title of the section, it is not such a big problem that the term is ambiguous because the section's content is precise enough. Also, the principle explains that these technologies are unpredictable.

Comment Gunnar Rundgren, Grolink AB: In general the prohibition of nano is fine, but I would speak against having so strict standards. You will just repeat the mistakes that were made with GMO in organics initially. In general, let some of the national organisations first try what works BEFORE writing standards. Make an IFOAM nano group that can move it ahead. Remain with a general prohibition.

Comment Wang Yungang, OFDC: agree in general. Could 2.3 be revised as "The intentional use of nanomaterials..." like 7.3.6 does?

Response: the "intentional" in 7.3.6 refers to manufacture, not use. It is not enough to prohibit intentional use, as in most cases operators that use nanotechnologies do not do it intentionally (they are not aware and don't want to know). There should be an active effort from operators to be vigilant and avoid them.

Comment Akiko Nicholls, Australia Certified Organic: 7.3.7 – guideline may be helpful to outline what sort of risk from which material that may cause nano contamination. 7.5.1 – Some literature has proven that there is no contamination risk to the food from nano material. If we define this criteria, there has to be definite reason why we set this criteria.

Response: as recommended by Gunnar, we shall wait to see the experience and knowledge develop on the ground by certification agencies and standard setters. At a

later stage, IFOAM could work on synthesizing these experiences to produce global guidelines.

Comment FiBL Switzerland: FiBL is aware that until now almost no research has been made about the risks of nanomaterials. Therefore the precautionary principle should be applied, when judging the nanomaterials. A case by case approach is recommended, but the total and indiscriminate ban of nanomaterials is not appropriate. It does not allow authorizing products in the future, even if they have been shown to be safe for human health and the environment or even of advantage. Example from FiBL Nano-specialist: Processing aid E551, Synthetic Dioxide, used as free-flowing substance for salts, can contain nanoparticles in the same way as diatomaceous earth, which are used as insecticides. It is difficult to set limits. In this case the application seems not to create health concerns for consumers.

More difficult it is with packaging materials, where SiO₂ is used on purpose, but might be useful. A clear problem is Silver, TiO₂, which is directly toxic and should be forbidden for use in organic food and agriculture (biocide effects are known when it is used in painting of outside areas, goes also in waterways and lakes). But again until now no clear criteria are existing. The examples show the complexity. FiBL proposes that a positive list or a negative list is developed, where materials are listed allowed or not in organic farming. There is also a need for a clear definition of nanomaterials that go under this article. The focus of a case by case assessment should be on synthetic nanoparticles.

Response: the FiBL position is not in line with IFOAM's position, which has been recently developed and reflects the general position of the membership. The organic movement at this point wants a ban on nanomaterials and not the creation of positive or negative lists. The definition of nanomaterials is in the definition section.

Comment Demeter Switzerland: (as compared to the FiBL comment) a more precautionary approach should be followed due to the lack of risk-related research on nanomaterials.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): These standards are not too strict! We need to keep nanomaterials out of organic food, personal care products and production!

Comment Christian Pein, Gäa e.V.: 2.3 The intention to exclude nanotechnology besides GMO is the right approach, but not at all inspectable, as for instance in Germany there are no legal requirements yet for product declaration in case of use of nanoparticles. Manufacturers of packaging materials, bakery equipment e.g. have no such declaration for their products. How can an organic processor obtain the information if such equipment/ material had been produced without the use of nanotechnology if no labeling requirements are in place? Unless there are manufacturers who produce without nanotechnology and are willing to show and prove all materials used are nano free inspection bodies will have no tools to verify compliance with the above mentioned "to be" standard requirements. A written statement/declaration by the manufacturer for all equipment/ packaging material that might contain nanoparticles should be developed and become compulsory in the first place.

Comment NASAA: 7.2.2 states ‘qualities’ is this correct or should it be ‘quantities’. As per GM technology, there is currently no splitting of this category into allowed and non-allowed practices; the key question is to what extent any variations are inspectable. Re packaging –this would be unavoidable and difficult to inspect; but more importantly is the proven safety of the packaging as it degrades (which would apply in most cases) (ref 7.5.1)

Response: see response in 7.2.2 regarding “quality”.

Comment ICS: we agree.

Response: Based on this feedback, we shall leave the requirements in this section as they are, except for the responses to the comments below. We realize that the implementation of these requirements will require additional efforts and learning, but we hope that by starting this process the organic movement will stimulate the input sector to produce “nano-free” inputs and materials suitable for use in organics.

General Principle

Organic agriculture is based on the precautionary principle and should prevent significant risks by adopting appropriate technologies and rejecting unpredictable ones.

Requirements

2.3.1 Genetic engineering and nanotechnology are excluded from organic production and processing until their long-term environmental and health impact has been properly studied.

Comment IOAS: This implies that there may be a change in future – is this is what is intended vis a vis these technologies? And studied by whom? If an operator produces a report that says there is no problem with either ge or nanotechnology (and there are plenty in existence) what then? What happens if a government is in favour – does that indicate a proper study? How can you reconcile 2.3.1 with 2.3.2 – 2.3.6.

Response: see below

Comment David Eboku: remove “until their long-term environmental and health impact has been properly studied”: rather be silent on this part. Such will be taken care when such evaluations have been completed and standards revised appropriately.

Comment David Gould: I suggest deleting this last phrase; when such time has occurred that their effects have been properly studied the ban can be lifted. Including the extra phrase now invites pro-GMO arguments.

Response: agreed with both. We agree that this sentence could lead to misinterpretation (some could argue that it has been properly studied) and so will remove the entire requirement, which is anyway repetitive with requirements below. We also agree with David Eboku that there is a process to reconsider requirements and that is the revision of this standard, which is always possible.

Comment FiBL and Demeter Switzerland: If the EU should allow Vitamine B2 based on an exception as GMO – is then a contradiction with the IFOAM Basic Standards or should at the end of 2.3.1 made an amendment (with restrictions on availability).

Response: that would be in contradiction with this standard yes. We do not want to include exceptions.

2.3.2 The deliberate use or negligent introduction of genetically engineered organisms or their derivatives is prohibited. This shall include animals, seed, propagation material, and farm inputs such as fertilizers, soil conditioners, or crop protection materials, but shall exclude vaccines.

Comment David Gould: Might need more guidance as to what constitutes adequate diligence.

Response: this requirement prohibits any introduction, whether it is deliberate or unintended, so defining what insufficient diligence would qualify as “negligence” is not useful in the context of this requirement. This requirement is about the use. Contamination is a different subject.

2.3.2 Organic operators shall not use ingredients, additives or processing aids derived from GMOs.

2.3.3 Inputs, processing aids and ingredients shall be traced back one step in the biological chain to the direct source organism *(see definition) from which they are produced to verify that they are not derived from GMOs.

Comment David Gould: So in the case where a microbe works on a substrate, both must be considered as non-GMO, correct? May need clarification here.

Response: yes, that is correct. See the definition.

2.3.4 On farms with split (including parallel) production, the use of genetically engineered organisms is not permitted in any production activity on the farm.

2.3.5 The use of nanomaterials is prohibited in organic production and processing, including in packaging and food contact surfaces.

2.3.6 No substance allowed under this standard shall be allowed in nano form.

Comment David Gould: this point is redundant with 2.3.5 and can be deleted.

Response: it is somewhat redundant but it is a useful clarification given the fact that operators still lack awareness about this topic. We will combine it into 2.3.5.

2.4 *Wild Harvested Products and Common/Public Land Management*

General Principle

Organic management sustains and prevents degradation of common biotic and abiotic resources, including areas used for rangeland, fisheries, forests, and forage for bees, as well as neighboring land, air, and water.

Comment David Eboku: remove coma after “air”.

Response: agreed.

Comment David Gould: Seems like a better word could be used than “common”—public? Native? Indigenous? Undeveloped?

Response: None of these alternative words is perfect either, as the resources may be private, the ecosystem may not be native or indigenous and may have been developed. In the absence of a better word, we leave “common”.

Requirements:

2.4.1. Wild harvested products shall only be certified organic if they are derived from a stable and sustainable growing environment. Products shall not be harvested at a rate that exceeds the sustainable yield of the ecosystem, or threaten the existence of plant, fungal or animal species, including those not directly exploited.

Comment David Eboku: remove “certified organic if they are”.

Response: agreed.

Comment David Gould: remove “stable and”: Stable might be rather subjective to define, and is not as crucial as “sustainable.”

Response: agreed.

2.4.2 Operators shall harvest products only from a clearly defined area where prohibited substances have not been applied.

2.4.3 The collection or harvest area shall be at an appropriate distance from conventional farming or other pollution sources in order to avoid contamination.

2.4.4 The operator who manages the harvesting or gathering of common resource products shall be familiar with the defined collecting or harvesting area.

Comment David Gould: add after area “including the impacts of collectors not involved in the certification scheme”.

Response: agreed.

2.4.5. Operators shall take measures to ensure that wild, sedentary aquatic species are collected only from areas where the water is not contaminated by substances prohibited in these standards.

3. GENERAL REQUIREMENTS FOR CROP PRODUCTION AND ANIMAL HUSBANDRY

3.1 *Split Production and Parallel Production*

General Principle

The whole farm, including livestock, is converted to organic management practices according to the standards over a period of time.

Requirements:

3.1.1 If the whole farm is not converted (split production) the organic and conventional parts of the farm shall be clearly and continuously separated.

Comment David Gould: replace by “shall be maintained clearly separate”.

Response: the proposed language is less insistent on the idea of continuity, which is important. We keep the current language.

3.1.2 Simultaneous production of the same organic and non-organic crops or animal products (parallel production) is only permitted where such production is undertaken in a way that allows clear and continuous separation of all product claimed as certified or certifiable as organic.

Comment David Gould: replace “the same” by “visually indistinguishable”.

Response: agreed

Comment Angela Escosteguy, Brazil: It is very risky to have simultaneous production of the same product conventional and organic animal products in the same farm. The temptation will be too big considering that the difference between the prices sometimes is more than double, for ex. as in the case of eggs (in Brazil); Suggestion: The simultaneous breeding of conventional, in conversion and/or organic animal of the same specie will be permitted only if they have different productive purposes, just in different areas and demarcated, and a maximum of five years.

Response: as we have not received more comments on this, we shall leave it as it is for now, although we intend to support this suggestion and will perhaps raise this proposal to the membership at a future stage of development of the standard. There is anyway also the risk that operations legally split into separate operations if they really want to do both.

3.1.3 Prohibited materials shall be stored in separate locations from those where organic products are handled.

Comment David Gould: replace by “grown and handled”

Response: agreed.

3.2 Maintenance of Organic Management

General Principle

Organic production systems require an ongoing commitment to organic production practices.

Requirements:

3.2.1 The production system shall not rely upon continuous switching between organic and conventional management.

3.2.2 In case of split or parallel production, the operator shall demonstrate continuous efforts towards bringing the entire farm under organic management, such as increasing the size of the organic operation relative to the conventional or adopting organic practices in the conventional operation.

Comment IOAS: Permanent split or parallel production would no longer be acceptable. Many of the currently accredited certifiers would not be in line with this requirement.

Response: ok, we will replace “shall” by “should” and move this requirement to a recommendation to avoid putting out of compliance a number of accredited CBs.

4 . CROP PRODUCTION

4.1 *Choice of Crops and Varieties and propagation of planting materials*

General Principle

Species and varieties cultivated in organic agriculture systems are selected for adaptability to the local soil and climatic conditions and tolerance to pests and diseases. All seeds and plant material are certified organic.

Comment David Eboku: remove “certified”

Comment Gunnar Rundgren, Grolink AB: remove “certified”

Response: accepted.

Comment Sophia Twarog, UNCTAD: By putting the focus on certified organic seeds, organic agriculture contributes to the erosion of agro-biodiversity in the world. This is a very serious issue. We have lost at least 70% of our agro-biodiversity in the fields. The sentence "All seeds and plant material are certified organic" should be deleted. Similar views on animal breeding. These requirements are very developed country biased.

Response: we will remove the reference to certification (see comment above) but keep the principle that they should be organic (that is a principle, the requirements are more flexible).

Comment Andre Leu: This section needs to be consistent with the IFOAM seed position paper that states: “A strict prohibition of untreated conventionally propagated planting material would be, at the present time, too restrictive for the organic farmers (especially in the North) and endanger the economic crop production in certain countries and would strongly limit genetic diversity of crops and varieties.” Change 4.1.1. to “In the transition period, [to a time when organic seeds are widely available] when certified organic seeds of suitable varieties are not available in sufficient quantity or quality the use of post-harvest chemically untreated conventional seeds and non-certified organic seeds may be allowed in consideration of the local situation.”

Response: see below the response to all comments in this section.

Recommendation:

The varieties should be from organic breeding programs (see 4.7).

Comment François Le Lagadec, InterBio Bretagne: add the recommendation “Operators should use organically bred varieties” as a first recommendation.

Response: agreed. We will rephrase the recommendation as follows: “Operators should give preference to organically bred varieties (varieties from organic breeding programs, see 4.7) when available”.

Requirements:

4.1.1 Operators shall use organically produced seed and plant material of appropriate varieties and quality.

Regional or other exception at certification body discretion

When organic seed and plant materials can be shown to be not available in sufficient quantity or quality for the required variety or equivalent varieties, conventional materials may be used provided that they have not been treated with pesticides not otherwise permitted by this standard.

Where untreated conventional seeds and plant materials are not available, chemically treated seed and plant material may be used.

Where either of these exemptions are granted, the certification body shall set time limits.

Comment David Eboku: replace “plant material” by “planting material”. General comment about these exception boxes: replace “at the certification body discretion” by “may be allowed” and adapt the language accordingly, for example here “time limits shall be set”.

Response: we will remove reference to certification and leave these boxes entitled “regional or other exception”. The time limit sentence will be removed (see comment below). Agree with “planting material”.

Comment David Gould: remove the last 2 sentences in the exception box. I disagree with the allowance for treated seed. The last sentence is unnecessary as it is already indicated in the definitions section.

Response: The allowance of treated seeds in standards varies depending on the regions of the world. It might be too constraining for some regions to not allow treated seeds at all. Agree with the removal of the last sentence.

Comment Mike Smith AsureQuality Limited: Where treated seed is used the seed should ideally be washed before planting to remove the treatment.

Response: washing the seed will pollute the water: what to do with the waste water then? It does not help prevent contamination of the overall environment.

Comment Gunnar Rundgren, Grolink AB: remove the recommendation. Bring the first sentence of the exception box into requirement 4.1.1. Delete the last sentence of the box.

Response: recommendation stays but we agree with the rest (see below)

Comment FiBL and Demeter Switzerland: Post harvest pesticide: If this point is omitted, propagation material from conventional plants treated in the growing period with prohibited fertilizers and/or pesticides cannot be used in OA even if organic material is not available. The problem is that these conventional mother plants and mainly the vegetative reproduction material treated with pesticides, can contain residues. However only direct seed treatment and post-harvest treatments should be forbidden (e.g putting the roots of strawberry plants put in a pesticide bath).

Response: agree to specify post-harvest treatment (see below)

Comment IOAS: Concerned about the addition of “equivalent varieties”. By whom or how could such an equivalence be determined? One variety cannot necessarily be substituted for another. Time limits have always been problematic in this area, although it is a nice idea. If the phytosanitary laws of a country require that seed be treated before it is imported, then you may be greatly restricting the availability of good seed to producers in those countries. There are several currently IFOAM accredited certifiers in countries where the law demands that seed be treated – which makes a nonsense of a time limit. In such cases time limits are chosen (and subsequently renewed) by CBs at random. In order to comply with the current IBS.

Response to all comments: We will rephrase 4.1.1 as follows:

4.1.1 Operators shall use organically produced seed and planting material whenever available in appropriate varieties and quality. When organic seed and planting materials are not available in sufficient quantity or quality for the required variety or equivalent varieties, conventional materials may be used provided that they have not been treated with post-harvest pesticides not otherwise permitted by this standard.

Regional or other exception

Where conventional seeds and planting materials untreated after harvest are not available, chemically treated seed and plant material may be used.

Regarding the last sentence about time limits, we agree to delete it from all the exception boxes as it is in the definition of the exception (which will be moved to the intro part). We realize that in the case of legal obligations for treating imported seeds, the CB might renew this exception many times, for as long as no alternative is available.

4.1.2 Seeds and plant materials shall be propagated under organic management for one generation, in the case of annuals, and for perennials, two growing periods, or 12 months, which ever is the longer, before being certified as organic seed and plant material.

Comment David Eboku: change to “Seeds and planting materials shall be propagated under organic management for one generation, in the case of annuals, and two growing periods, or 12 months, which ever is the longer, for perennials, before being used as organic seed and plant material.”

Response: We do not agree. “Planting material” usually has a different meaning. We believe the sentence is clearer as it is.

Comment Gunnar Rundgren, Grolink AB: rephrase to “Seeds and plant materials shall be propagated under organic management for one generation, before being considered as organic seed and plant material”.

Response: this would make the requirement very strict for perennials. It would mean that several years of “conversion” would apply before the seeds/plant materials can be sold as organic. We do not see why requirements for seeds should be so drastically higher than requirements for food products (many of which are seeds!). We will in

however change “12” months to “18 months” to bring this in line with the general conversion requirements for perennials, which we agree to revert back to the IBS values. To produce an “organically bred variety” is a different story (see plant breeding requirements).

- 4.1.3** Propagation can be based on generative propagation (seeds) as well as vegetative propagation derived from various plant organs like e.g.
- a. partitioned tubers, scales, husks,
 - b. partitioned bulbs, brood, bulbs, bulbils, offset bulbs etc.,
 - c. layer, cut and graft shoots
 - d. rhizomes
 - e. meristem culture

Comment David Eboku: replace “can” by “may” and delete “like”

Response: agreed.

Comment François Le Lagadec, InterBio Bretagne: replace “can be” by “is”.

Response: see response to David Eboku’s comment.

- 4.1.4** All multiplication practices except meristem culture shall be under organic management.

Comment IOAS: Not practical or possible to apply – contradiction of permitted regional variation at 4.1.1 which permits non organic propagation materials.

Response: this only applies to the multiplication practices on the farm itself, not to purchased propagation materials. We shall clarify the language by putting “all multiplication practices on the farm, except”.

- 4.1.5** Seed treatments, vegetal propagation materials, bedding materials and substrates shall only consist of substances listed in appendices 1 and 2.

Committee comment: we shall delete “seed treatment”. Seed treatments and treated seeds are anyway better covered under requirement 4.1.1

4.2 Conversion Period (Plant Production)

General Principle

A conversion period enables the establishment of an organic management system and builds soil health and fertility.

Requirements:

- 4.2.1** All the requirements of this standard shall be met for the duration of the conversion period.

4.2.2 The start of the conversion period shall be calculated from the date of application for certification.

Comment David Eboku: replace “application for certification” by “written decision to convert to organic”.

Response: this suggested language would not be suitable to the most common case where the operator is asking for certification. We will amend as follows “from the date of agreement with the control body”. We shall add the following definition for control body in the definition section: “Control Body: A third-party organization that has independent oversight of the organic status of an operation. A Control Body may be a certification body, a governmental competent authority, a participatory guarantee system, a cooperative, or a community supported agriculture program.”

Regional or other exception at certification body discretion

The conversion period may be calculated retroactive to the application only on the basis of sound and incontrovertible evidence of full application of the standard for a period at least as long as 4.2.3

4.2.3 The length of the conversion period shall be at least:

- 24 months before sowing or planting in the case of annual production
- 24 months before grazing or harvest for pastures and meadows
- 36 months before harvest for other perennials

Regional or other exception at certification body discretion

The conversion period may be shortened to 12 months provided that the producer can provide a plan to implement full compliance of this standard in the coming year.

Comment IOAS: this Regional variation is in contradiction to 4.2.1 which states requirement to meet the standard for the duration of the conversion period. Variation states that conversion may be shortened to 12 months on supply of a plan to implement full compliance which suggests that the 12 month conversion period is not in full compliance with the standard during that 12 month period.

Response: see response below: we will delete the exception.

Questions/note from the committee: The committee decided to increase the length of the conversion period requirements (during which full application of the standard under CB supervision is required) as compared to the IBS, so as to bring it back in line with most of the (non-US) standards. However, as a compromise towards the US approach, the committee included an exception at the discretion of the certification body that this period could be shorted back to 12 months (the old value in the IBS) if the operator could demonstrate the existence of a forward looking organic system plan ensuring full compliance with the standard. Is that approach acceptable to the membership?

Comment Diana Callear, Afrisco Certified Organic: NO. I don't see the point of stating exact time periods and then saying they can be shortened. The conversion

period exists to get (1) chemicals out of the ground, ie 4.2.4, and (2) the farmer building up the soils with positive land management. If (2) can be achieved after one season, then 4.2.3. could to be shortened, but will always be subject to 4.2.4. (which should be stated first, and which should be assumed as normal unless there is very good evidence that the land was not used for at least three years). And I do not see what is achieved by the inclusion of 4.2.2., in terms of the objectives of the conversion period.

Comment Mike Smith,ASUREQuality Limited: yes.

Comment Wang Yungang, OFDC: acceptable

Comment David Gould: yes.

Comment Sophia Twarog, UNCTAD: Discussions in developing countries have indicated that conversion periods in tropical climates do not need to be as long as in northern climes. For example, after extensive discussions and consultations, the conversion period in Africa is less. I suggest that these conversion periods be shortened or reworded in such a way that focuses on the objective to be achieved.

Comment Paddy Doherty: sure.

Comment Angela Escosteguy, Brazil: yes.

Comment Andre Leu: Conversion times need to more flexible and reflect the conditions of the region. The East African Standard is an example.

Comment David Eboku: The objective in this case appears, to me, to be to ensure the protection of organic produce from contamination. It would be adequate then to make objective based provisions allowing flexibility.

Comment Gunnar Rundgren, GroLink AB: The standard should be as it is in the current IBS (change back to 12, 12 and 18 months respectively). This has been voted several times by the membership and there is no reason to change this again. It is only discriminating new entrants with no value. There is no sound basis for a longer conversion requirement. Its main function is to keep out new farmers and can not be in the interest of the organic movement even if it can be in the interest of existing farmers if they look only at their wallet.

Comment Akiko Nicholls, Australia Certified Organic: Yes, however, from our situation in Australia, we still need to go through 36 months (minimum 24 months prior to retrospectively confirmed 36 months compliant to the standard) as it's AQIS requirement for exporting organic products. So the change won't make any difference to us.

Comment Dr Praveen Singh: The draft is really good and covering almost all the aspects of Organic Farming. But while reading the document I found that information/standard is missing for those land which is virgin and producer is first time cultivating the land. Is virgin land cultivated first time needs transition period? In my opinion, the draft document must contain information on these types of land. This

will be quite helpful for the investors who are investing in agriculture/crop production in African countries.

Comment FiBL and Demeter Switzerland: this is acceptable as it was for many years the common interpretation of the IFOAM Standards Committee. Retroactive recognition of previous land-use should not allow the conversion period to be shorter than 12 months. A conversion period longer than 12 months should only be implemented when there is no possibility to restore soil health and -fertility within 12 months, or when an organic management system cannot be established within that period. However, such conversion-standards would, when used as an “off the shelf standard”, seriously impair compliancy with the 2 major organic standards (EU and NOP).

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): The US requirement is 36 months from the application of prohibited materials. A conversion should be possible in a shorter period of time based on documented history of land use and the materials used. And some pieces of land are too polluted to ever convert to organic – though maybe mycoremediation will make it possible.

Comment Christian Pein, Gäa e.V.: Yes, it is acceptable.

Comment NASAA: Not an issue for NASAA as National Standard already mandates 3 years same as US.

Comment ICS: yes.

Response: in line of the comments received, we shall bring back the length of the conversion periods to the IBS values and we will delete the exception.

4.2.4 The length of the conversion period should be defined to provide for a period of at least 36 months from the last date of application of any prohibited input.

Comment Gunnar Rundgren, GroLink AB: change to 12 months.

Response: Disagree. We shall leave this requirement as it is, except that “should” shall be replaced by “shall”. We want to enable a broad acceptance of equivalence. This requirement of 36 months is also in line with the example provided in the COROS.

Comment Afrisco: Does this not contradict the periods given in 4.2.3?

Response: no it doesn't. 4.2.4 prescribes the length of the period without application of prohibited input, whereas 4.2.3 prescribes the length of the period with full compliance (in the case of certification, under CB supervision) with the standard.

4.2.5 The conversion period may be extended by the certification body depending on conditions such as past use of the land, management capacity of the operator and environmental factors.

Comment IOAS: Not a standard for the operator but a CB criterion.

Comment David Eboku: remove “by the certification body”

Response: we agree with the IOAS comment, this requirement is in fact more a requirement for the CB, not really for the operator. We shall delete 4.2.5 altogether. The awareness that the period might be longer than the minimum is already covered by the language “shall be at least” in 4.2.3.

4.3 Diversity in Crop Production

General Principle

The development of living soils is the foundation of organic production. Soil health and quality are the basis of soil management practices and are critical to successful pest, disease and weed management. Organic growing systems are soil based, care for the soil and surrounding ecosystems and provide support for a diversity of species, while encouraging nutrient cycling and mitigating soil and nutrient losses.

Comment Afrisco: “Encouraging” is too soft a term. Suggest “... based on nutrient cycling ...”

Response: agreed, we will change it to “Organic growing systems are soil based, care for the soil and surrounding ecosystems, provide support for a diversity of species, are based on nutrient recycling and mitigate soil and nutrient losses”.

Comment Sophia Twarog, UNCTAD: The standard does not offer enough precautions that organic agriculture be just like conventional agriculture but with substitutions of bio-inputs instead of other externally purchased inputs. It should say something about not allowing monocropping (except in exceptional cases). The biggest criticism I hear about organic agriculture (from those whose opinion I respect) is that it does not guarantee sustainability because you can end up with commercial monocropping systems.

Response: the difficulty is to define these exceptional cases where monocropping is permitted (according to the requirements below it is basically allowed for perennials). We believe that the detailed requirements of the standard address this issue the best we can.

Requirements:

4.3.1 Crop rotations for annual crops shall be established, to manage pressure from pests, weeds and diseases and to maintain soil fertility, unless the operator demonstrates diversity in plant production by other means. Crop rotations shall be diverse and include soil-improving plants such as green manure, legumes or deep rooting plants.

4.3.2 For orchards and plantations, there shall be managed floor cover and/or diversity or refuge plantings.

Comment David Gould: replace “and/or” by “and”: Managed floor cover should always occur, as should diversity or refuge plantings.

Response: agreed. We shall also replace in 4.3.1 “demonstrates” by “ensures”.

4.4 Soil Fertility and Fertilization

General Principle

Organic farming returns microbial plant or animal material to the soil to increase or at least maintain its fertility and biological activity.

Comment David Eboku: coma after “microbial”

Response: agreed.

Comment François Le Lagadec, InterBio Bretagne: add a Recommendation as follows: “Biodegradable material of microbial, plant or animal origin produced from organic practice should form the basis of the fertility programs.”

Response: we agree with the intention of this but include it in the hierarchy of the new recommendation (see response in requirement 4.4.2).

Requirements:

Comment Afrisco: The wording of this section does not exclude input substitution through the use of “allowed inputs”. There should be emphasis on the general sequence to soil health, quality and fertility, viz, green manures, mulch, compost, crop rotation and in cases of demonstrated deficiencies, allowed inputs. This is partially satisfied by the requirements of 4.4.7 which refers specifically to mineral fertilizers. Brought in plant and animal manure based inputs should be included. Suggest same sequential format as 4.5.1 and 4.5.2.

Response: agree with the intent of this comment. See response in 4.4.2 below.

4.4.1 Soil organic matter, microbial activity and general soil health and fertility shall be maintained or improved. The operator shall prevent accumulation of heavy metals and other pollutants in the soils.

Comment David Gould: Maintaining at a low-to-zero bank account of on-farm soil fertility via input substitution should not be allowed.

Response: we will change the language to “shall be improved if low and maintained or improved if satisfactory”.

Comment IOAS: Use of some materials currently permitted in the IBS e.g. copper will inevitably increase the accumulation of heavy metals in the soil therefore this standard would prohibit use of copper salts at all.

Response: we will change it to “over-accumulation”. That will be more vague but more flexible.

4.4.2 Material of microbial, plant or animal origin shall form the basis of the fertility program.

Comment David Gould: same comment as above. Add: “Maintenance of fertility may not rely solely on off-farm inputs”.

Response: agreed. We shall add this sentence to the requirement. Also, we shall add the following recommendation in the recommendation section:

“The fertility program shall be based on material of microbial, plant or animal origin, such as green manure, compost or mulch, obtained through the following sources in this order of priority:

- a. organically produced on the farm;
- b. of organic quality, obtained from the surrounding farms or natural environment;
- c. other inputs allowed under Appendix 2”.

4.4.3 Nutrients and fertility products shall be applied in a way that does not harm soil, water, and biodiversity.

Question/note from the committee: Requirement 2.2.4 reads “Grazing management shall not degrade land or pollute water resources” and requirement 4.4.3 reads “Nutrients and fertility products shall be applied in a way that does not harm soil, water, and biodiversity”. The committee realizes that these requirements are quite subjective and hard to inspect, and that organic standards often set concrete requirements to address them, such as for example maximum levels of Nitrogen application per ha, maximum stocking density of animals per ha, etc. The committee finds it difficult to set such upper limits that would be relevant at the global level, but would like to ask the membership if they feel that such limits should be set, and if yes, what they should regulate and on what they should be based. Assuming that the standard would use the EU limit of 170 Kg Nitrogen/ha/year; would that pose a major problem to organic operators outside the EU?

Comment Diana Callear, Afrisco Certified Organic: The issue (170kgs, etc) is so Eurocentric that it is irrelevant here. So please don’t ask us to do the calculations. And stocking levels are much less important than grazing management. (Stocking levels are very high but go with very quick movement between fields in Holistic Resource Management, which our best stock farmers use, with marvelous long term effects on the veld.) In both cases the numbers should be sought only when there is a real vulnerability to degradation and pollution.

Comment Mike Smith, AsureQuality Limited: We currently use 170 kg/ha for all operators EU suppliers or not.

Comment Paddy Doherty: I think it is fine the way it reads – allowing an outcome-based solution.

Comment Gunnar Rundgren, GroLink AB: 170 kg Nitrogen per ha is extremely excessive in some parts, where you can only have a sheep per hectare. This clearly shows that to have one global value makes no sense. Either it will make it impossible in the most intensively managed parts of the world or it will totally lack relevance in

most parts of the world. Note that a lot of natural pastures in developed countries are threatened by too little grazing rather than too much...

Comment Wang Yungang, OFDC: use of nutrient such as nitrogen may differ greatly in different systems such as growing wheat and growing several seasons of vegetables in one year. It is hard to set one limit for them.

Comment Akiko Nicholls, Australia Certified Organic: The limit should not be set as it could be depending on the environment, culture and the location.

Comment David Gould: Using the EU limit would not be the best for a global model. Inspectability on this topic may be more a question of technical competence of an inspector and certifier. The NOP requirement is not quantitative, but I have found it to be adequately descriptive if the control body personnel actually knows what they are evaluating. One option may be to have the IFOAM Standard allow the CB to reference another regulation's model, and provide some options so that the choice may be more regionally applicable or relevant.

Comment FiBL Comment: We agree that the current formulation is not very precise. We recommend that the following issues are taken into account:

- The precautionary principle requires that there should not be an over-supply with certain fertilizers, e.g. phosphorous, which can neither be justified with regard to the scarcity /limited resources of phosphorous
- To raise awareness that certain fertilizers might pose a contamination-risk like cadmium for phosphorous fertilizers, copper in some pig slurry.
- To require the principle of a balanced nutrient-supply (nutrient supply corresponding with the nutrient-need) in order to avoid inefficient use of nitrogen with losses in the ground-water or in the air and accumulation of nutrients such as P and K.

We do not think that for all regions the 170kg shall apply, but there should be amended clear criteria to the existing rule “Nutrients and fertility products shall be applied in a way that does not harm the environment, in particular the soil (no significant accumulation of heavy metals or phosphorous);
-, water (no significant eutrophication of water sources), and
- biodiversity (no significant change of flora due to over fertilisation of soils, which still have a rich biodiversity.
- air (keeping greenhouse gases emissions on a low level by documenting that the site- and farm specific measures to reduce the losses have been taken).

The EU limit of 170 kg N is not a nominal limit but relates only to nitrogen from animal manure. Other nitrogen sources can be used unrestrictedly. The EU limit sanctions those areas, where other N-sources than animal manure are not available. FiBL recommends a balanced nutrient supply where nitrogen supply may not exceed the need of the plant. Whether this nitrogen comes from animal manure or other N-rich sources, is irrelevant.

Additional comment from Demeter Switzerland: The origin of N-rich fertilizers should be considered if from animal sources or other sources.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): A standard for nitrogen would be helpful in the US, but setting standards that could work in all countries seems unlikely.

Comment Christian Pein, Gäa e.V.: Nitrogen application per ha by taking into account the number of animals (different by species) is a practicable solution and should be based on the EU limit, that should be fair enough for operators outside the EU as well. There are tables available for calculating the amount of Nitrogen. Within most German private standards the amount allowed is even less than the EU limit.

Comment NASAA: Considering regional variations it is very difficult to set limits to prevent pollution and contamination – many Australian soils may require more Nitrogen per year than EU soils – this will also relate to different farming systems. This needs much more assessment before setting limits in the IFOAM Standard.

Comment ICS: We feel one standard should not be set at the global level. The CB should be allowed to set the standards based on unique environmental conditions to ensure requirements of 2.2.4 and 4.4.3 are met by the operations being certified.

Response: there is a clear majority of comments against the use of global limits and in favor of more outcome oriented criteria. The ones proposed by FiBL seem reasonable. We will keep the current language of the requirement but add the following recommendation in the recommendation section:

“Nutrients and fertility products shall be applied in a way that does not harm soil, water, and biodiversity. This shall be evaluated through the use of appropriate indicators, such as:

- a. no significant accumulation of heavy metals or phosphorus in the soil.
- b. no significant contribution to the eutrophication of water bodies.
- c. balanced nutrient supply as compared to the nutrient needs.”

4.4.4 Material applied to the land or crop shall be in accordance with Appendix 2.

4.4.5 Manures containing human excrement must not be applied on soil that will be used to grow crops for human consumption within the next six months.

Comment David Eboku: replace “must” by “shall”

Response: see below

Comment Afrisco: “grow Crops”: Annual and perennial crops? What about fruit and nut trees?

Response: the intent was to include all crops for human consumption, including fruits and nut trees. But see response to the comments below.

Regional or other exception at certification body discretion

Exceptions may be made where detailed sanitation requirements prevent the transmission of pests, parasites and infectious agents and manures are not mixed with other household or industrial wastes that may contain prohibited substances.

4.4.6 Manures containing human excrement (feces and urine) are prohibited for use on crops for human consumption

Comment IOAS: Clear contradiction to 4.4.5 which states that this material may be used on crops for human consumption after six months. Understand that the intent of 4.4.5 may be that human excrement is not applied to growing crops, but this would not apply to a production cycle of more than 6 months or to perennial crops.

Comment Afrisco: Is this not a duplication of 4.4.5?

Comment Gunnar Rundgren, Grolink AB: delete 4.4.6 and rephrased 4.4.5 as follows: "Manures containing human excrement can be used if precautionary measures are taken to prevent the transmission of pests, parasites and infectious agents and manures are not mixed with other household or industrial wastes that may contain prohibited substances. sanitation requirements".

Comment David Gould: If this is not meant to be in conflict with 4.4.5, then it needs to be reworded to make that clearer.

Comment Sophia Twarog, UNCTAD: I completely disagree with taking human beings out of the natural cycle. These contradict the earlier requirement 2.2.3. Cities are the graveyards of agricultural nutrients. This will become increasingly a problem as population shifts from rural to urban areas. Already over 50% of humanity lives in cities. We simply must find a way to make a complete cycle and bring those nutrients back to the fields. One key nutrient that must be recycled from human excrement is phosphorous. Please see the article put out by Soil Association on this. We clearly must take precautions that no diseases are passed on. But I believe that our prohibitions in organic standards in this area have a lot more to do with people's psychological hang-ups with their own biological selves than any science. To disallow the use of human excrement is wholly unsustainable. In my view, we should collect this waste in cities and elsewhere, use it to generate energy in biogas digestors, and then take the slurry from the digestors to be used as organic fertilizer on farms. This will solve three problems at once: sanitation, energy and sustainable agriculture. Organic agriculture requirements should surely not prevent this much needed solution. These requirements should be changed to indicate that human excrement should be properly treated to prevent transmission of pests, parasites and infectious agents.

Comment Andre Leu: China allows the use of human manures and this will be the case with many Asian standards as this is a valuable resource that needs to be recycled and returned to the farm. We will be excluding the fastest growing organic sectors with the current prohibition wording. The emphasis should be on preventing the transmission of diseases through the correct use methodologies - not prohibition.

Response: the requirements as they are written do not intend to leave humans out of the nutrient cycle but to implement basic hygienic measures. They still leave space for use of human excrements as nutrient source on the farm: they can be applied on crops that are not for human consumption (e.g. livestock feed, pastures, green manure cover crops) and they could be applied just after harvest of annual edible crops if the crop cycle is such that it leaves 6 months before the next edible crop will be sown or planted. However, for the sake of simplification and given the comments received, we shall merge 4.4.5 and 4.4.6 into "4.4.5 Human excrement shall be handled in a way

that reduces risk of pathogens and parasites and shall not be applied within six months of the harvest of annual crops for human consumption with edible portions in contact with the soil.” There shall be no exception left to the control body on this aspect.

4.4.7 Mineral fertilizers shall only be used in a program addressing long-term fertility needs together with other techniques such as organic matter additions, green manures, crop rotations and nitrogen fixation by plants. Their use must be justified by appropriate soil and leaf analysis or diagnosed by an independent expert.

Comment David Eboku: replace “must” by “shall”

Response: agreed.

Comment Afrisco: Include “brought in” plant and animal manure based fertilizers. See comment above under Requirements.

Response: see 4.4.3 rephrased above.

Comment IOAS: Significant change – addition of mandatory soil/leaf analysis or use of an independent expert. This adds a considerable economic burden to operators and such analysis or expertise may not be available at all in developing countries.

Response: yes, this is additional as compared to the IBS, but we did not receive negative feedback on this. An independent expert could be just an extension agent or NGO support staff. Usually, in cases where absolutely no external expert is available, mineral fertilizers will not be available either.

4.4.8 Mineral fertilizers shall be applied in the form in which they are naturally composed and extracted and shall not be rendered more soluble by chemical treatment, other than addition of water and mixing with other naturally occurring, permitted inputs.

Comment David Gould: I suggest leaving this last phrase out; mixing two allowed inputs to create a synthetic result might happen in situ on the farm, but that could happen nonetheless by deleting this phrase. You want to avoid having the mixing occur before application, whether it’s in the barn or at the fertilizer factory. Delete “and mixing...”

Response: agreed. We will delete from “other than...inputs”.

4.4.9 Chilean nitrate and all synthetic fertilizers, including urea, are prohibited.

4.4.10 The production of terrestrial plants shall be soil-based. The production of such crops in hydroponic systems is prohibited.

4.4.11 For mushroom production, substrates shall be made of products of organic agriculture, or other non-chemically treated natural products such as peat, wood, mineral products or soil.

Question/note from the committee: A requirement (4.4.10) has been added as compared to the IBS, to prevent organic mushrooms being grown on substrates coming from conventional agriculture. Does the membership agree with this requirement as it is phrased?

Comment IOAS: Seems inconsistent to introduce a requirement for mushroom substrate when there is no similar requirement for the composition of propagation substrate.

Comment David Gould: Is the intention that wood shavings from a sprayed forest are OK? Should be clarified either way.

Comment Diana Callear, Afrisco Certified Organic: looks good.

Comment Mike Smith, AsureQuality Limited: no comment.

Comment Paddy Doherty: ok.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): Yes, this wording is good.

Comment Gunnar Rundgren, GroLink AB: No. And while I do think it is reasonable to expect organic mushrooms to be grown on organic straw, this was not required in Europe some 15 years ago. because there was no, or rather not enough, organic straw. And this is still the case in many countries, there is simply no organic straw and the mushroom growers can't grow the substrate themselves.... so they end up buying from somewhere. In a local situation you might be able to point them to wild growing grasses or the kind of straw that is from default organic etc. but it will not be "organic" straw in the sense of the standard. The culture substrate for mushrooms shall be constituted of organic ingredients such as organic grain, seed-cakes and straw. Organic farmers in Europe used conventional star up to not so long ago. Most local certifiers tried to regulate, e.g. straw not from crops where they used straw shortener, or didn't spray etc. Conventional straw is still used as bedding material and thus if you grow mushrooms on your horse manure it can anyway be from non-organic straw. I recommend to use the EAOPS language: "Where organic substrates are not commercially available in sufficient quality and quantity, ingredients from conventional production or of natural origin which do not pose a risk of contamination may be used."

Comment Akiko Nicholls, Australia Certified Organic: This is unclear. Soil based include "compost based"? What's about mushroom grown in a log such as Shitake mushroom? Is it allowed?

Comment FiBL and Demeter Switzerland: We do agree with this proposal.

Comment Christian Pein, Gäa e.V.: Yes we agree, experience within our clients has shown practicability.

Comment NASAA: In some regions to preclude substrates (logs, straw, compost etc) from conventional sources will prevent mushroom production. Needs to have an

exemption if not available substrates must be free from contamination. Regional or other exceptions required.

Comment ICS: Yes.

Response: we shall leave the requirement as it is, although there are different opinions about this topic. The committee feels that mushrooms can be considered as livestock from the point of view of the nutrient cycle and hence should be “fed” with organic “feed”.

4.5 Pest, Disease and Weed Management

General Principles

Organic farming systems apply biological and cultural means to prevent unacceptable losses from pests, diseases and weeds. They use crops and varieties that are well-adapted to the environment and a balanced fertility program to maintain fertile soils with high biological activity, locally adapted rotations, companion planting, green manures, and other recognized organic practices as described in this standard.

Requirements:

- 4.5.1** The organic production system shall include positive processes/mechanisms to manage pests, weeds and diseases. These include:
- a. choice of appropriate species and varieties;
 - b. appropriate rotation programs;
 - c. mechanical cultivation;
 - d. protection of natural enemies of pests through provision of favorable habitat, such as hedges, nesting sites and ecological buffer zones that maintain the original vegetation to house pest predators;
 - e. natural enemies including release of predators and parasites;
 - i. mulching and mowing;
 - k. grazing by animals;
 - l. mechanical controls such as traps, barriers, light and sound.

Comment François Le Lagadec, InterBio Bretagne: add as point e (and adopt numbering) “diversified ecosystems. These will vary between geographical locations. For example, buffer zones to counteract erosion, agro-forestry, rotating crops, intercropping.”

Response: these are already covered in points b, and d. However, we will rephrase point b as “appropriate rotation programs, intercropping and companion planting”. We will also correct the numbering. Erosion is an issue covered in other parts of this standard.

4.5.2 When the measures in 4.5.1 are not sufficient, pest, disease and weed management products that are prepared on the farm from local plants, animals and micro-organisms, or substances permitted under Appendix 3, may be used, provided that they do not jeopardize the ecosystem or the quality of organic products.

Comment David Gould: Is tobacco OK? Probably should have a short list of prohibited naturally-occurring materials, similar to NOP 205.602.

Response: Tobacco tea is allowed under Appendix 2 as a plant preparation, but pure nicotine would not be allowed.

4.5.3 Physical methods for pest, disease and weed management are permitted, including the application of heat.

4.5.4 Thermal sterilization of soils is prohibited.

Regional or other exception at certification body discretion

Exceptions may be granted to protect cropping structures in instances of severe disease or pest infestation that cannot be otherwise remedied through measures in 4.5.1 to 4.5.3.

Comment David Gould: granted by whom and under what circumstances specifically? This needs more detail or should otherwise be deleted.

Response: Exceptions in the exception boxes are always granted by the Control Body (see responses earlier in the document). The circumstance is explained in the sentence itself.

4.5.5 Any formulated input shall have only active ingredients listed in Appendix 3. All other ingredients shall not be carcinogens, teratogens, mutagens, or neurotoxins.

Question/note from the committee: Requirement 4.5.5 is currently phrased just like in the IBS. However, the committee wants to raise the attention of the membership that this requirement allows a whole unregulated range of synthetic chemicals to be applied to the field on the ground that they are not the “active” substance in a given input. In addition to the fact that this is an obvious breach to the organic principles, there are legitimate doubts whether all so-called “inert” substances are in fact really inert. These “inert” substances are outside of the scope of the some important organic regulations, including the EU, which means that they are being used extensively within the EU. The committee would like to ask the membership whether they would agree to have this requirement made stricter (e.g. no synthetic inert ingredients allowed) and if yes, if producers (especially in Europe) need a phasing out time, and how many years should that be.

Comment IOAS: In most cases, it is not possible to know whether the inactive ingredients are carcinogens, teratogens, mutagens or neurotoxins (unless all materials are analysed by some body) – this standard is generally ignored by CBs and the

accreditation body because it cannot be implemented unless such effects are common knowledge.

Comment Diana Callear, Afrisco Certified Organic: In general the issues around inputs are very difficult for any certifier too small to employ a chemist. For great clarity, I can see no alternative but for a move towards the NOP, with much more specific lists of both synthetic and non-synthetic input ingredients that can be permitted, whether active or inert. And yes, the EU farmers should have two years to come in line.

Comment Mike Smith, AsureQuality Limited: In New Zealand producers are export focused so inputs are assessed to meet USDA NOP requirements in terms of inerts. We wouldn't want to see that assessment process made more difficult. We would support more restriction but based on the USDA NOP criteria.

Comment Gunnar Rundgren, GroLink AB: One of many examples why global standards don't work. I share concern about inerts but don't believe in global regulation. If the EU guys haven't sorted this out (we did sort it out some 20 years ago in Sweden I believe) and need a phase-in period, how will it be in other countries where this is even less understood, transparency from input manufacturers is less and the organic sector is small. And why are we caring for that there should be a phase-in period for EU producers for one of the few standards that go further than the status quo in the EU, while there is no such consideration for any of the other standards? And for conversion there is a "compromise" with the US standard.

Comment Wang Yungang, OFDC: agree to have a stricter requirement on the use of inert substances.

Comment Akiko Nicholls, Australia Certified Organic: No – inert is a huge area that should not be set to cover various countries to comply. However, whether active or inert, synthetic substance should not be used for soil amendment, fertilizer and soil improvement that have direct contact to the soil. Pest control material could have inert that may be synthetic.

Comment David Gould: This is a big problem even where it is regulated, like in the NOP. Some of the supposedly “harmless” inerts that are allowed degrade into the most harmful ones that are prohibited. It is going to be difficult to get consistent evaluation of this without substantially more guidance to certification bodies. I would not be in favor of prohibiting synthetic inert ingredients though, at least not without a lot of consultation with organic farmers everywhere. We don't want to chase organic farmers out of the program by making their lives too impossible. While I would prefer that no such inerts are ever used, I know and respect a lot of really good certified organic farmers who use such materials sometimes, and they are doing the best they can in a very imperfect world. One approach is to have some really expert review of commercial formulations, such as is done by OMRI and FiBL – that helps at least.

Comment FiBL and Demeter Switzerland: 1. Generally we would agree to be more restrictive with inerts; however it might be useful not to completely forbid these substances if they are of synthetic origin. A case-by case approach should be followed, evaluating first the most critical inerts. The same criteria for evaluation should apply

like for other products. If substances are phased out a sufficient long transition period (e.g. 3-4 years) should be foreseen to allow alternatives to be established and experienced. 2. In many countries, the composition of inerts is confidential. Requirements concerning inerts are therefore impossible to be respected by organic farmers, and impossible to be controlled by inspection and certification bodies. The above statement ‘whether all so-called “inert” substances are in fact really inert’ may be justified in a minute proportion of cases; for the great majority, it is driven by naïve suspicion rather than scientific considerations.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): Synthetic inerts should not be allowed. 5 years to phase out their use should be adequate.

Comment Christian Pein, Gäa e.V.: If it was to become more stricter, we would ask for a sufficient phasing out time in order to evaluate alternatives in accordance with the FiBL activities. No idea how long this could possibly take.

Comments NASAA: The inclusion of so-called “inerts” provides tolerance for proprietary formulations, particularly for crop protectants, that enhances ease of use, and commercial competitiveness (ie is pragmatically necessary), but is at odds with the minimalist intervention philosophy underpinning the Standards. Assessment should place some weight on the effective applied dose of the “inert”, relative to the regulated permitted ingredient in any formulation assessment.

Comment ICS: Leave 4.5.5 as is.

Response: based on the above comments, we do not see that it is urgent, nor feasible to regulate inerts more strictly, such as by prohibiting synthetic inerts or establishing a list of those permitted. We recognize that the second sentence is hard to inspect but will leave it nevertheless. In order to encourage progress in this area we shall add the following recommendation: “Formulations approved for use in organic agriculture by a specialized organic material review organization/program shall be preferred.”. We believe that this will be the solution in the future but it is to early to impose it as a requirement across the globe.

4.6 *Avoiding Contamination*

General Principle

All relevant measures are taken to ensure that organic soil and food are protected from contamination.

Requirements:

4.6.1 The operator shall employ measures including barriers and buffer zones to avoid potential contamination and limit contaminants in organic products.

Comment Afrisco: It would be fantastic if buffer zones were defined in an objective manner.

Response: It is easier to ask for a definition and clearer language than to actually come up with a proposal. The committee will examine proposals submitted, if any, but will not spend time on this without a starting point.

4.6.2 All equipment from conventional farming systems shall be thoroughly cleaned of potentially contaminating materials before being used on organically managed areas.

4.6.3 For synthetic structure coverings, mulches, fleeces, insect netting and silage wrapping, only products based on polyethylene and polypropylene or other polycarbonates are permitted. These shall be removed from the soil after use and shall not be burned on the farmland.

Comment IOAS: This is the same as the current standard but would like to bring to your attention the fact that it excludes total and fast bio-degradable materials such as cornstarch based mulches – which use surely should be encouraged.

Response: we will change it to “only products based on polyethylene and polypropylene or other polycarbonates, and biodegradable materials (e.g. starch based) are permitted”

4.6.4 The operator shall monitor crop, soil, water, inputs for risks of contamination by prohibited substances and environmental contaminants.

Comment IOAS: New standard – no clarification on what is required here for such monitoring.

Response: this is the question we asked the membership. See inputs below.

Comment David Gould: Not bad, but seems redundant with 4.6.1 “measures.”

Response: We will put this requirement first, that way will be more logical.

Requirement 4.6.4 says “The operator shall monitor crop, soil, water, inputs for risks of contamination by prohibited substances and environmental contaminants”. The committee would like to ask the membership whether they think that this requirement should further specify what are the appropriate measures to monitor contamination. Another question is whether maximum contamination levels should be set, and if yes, on what (soils, crops, inputs, water, etc.) and what would be the basis for setting these levels for a globally applicable standard. Should such levels be specific to certain toxics or categories of toxics (e.g. heavy metals, pesticides)?

Comment Diana Callear, Afrisco Certified Organic: not my area of expertise.

Comment Mike Smith,ASUREQuality Limited: Very difficult to set levels on a world wide basis. The two biggest issues facing organics is contamination of raw materials (green waste) used in composting and background soil contamination from organochlorines. Plants don't tend to uptake organochlorines whereas it can be a problem with animal production. At the end of the day organic certification does not guarantee no contamination. The other topical issue is potable water there is opposition to the use of potable municipal water supplies that have been subject to

fluoridation. All of these should be outcome based in that the end product should be free of contamination.

Comment Paddy Doherty: Once you set levels then you need to test for them. Better to require protection measures so that the operator can say they are doing their best.

Comment Gunnar Rundgren, Grolink AB: The standard as good as it is. To set global levels is impossible and pointless.

Comment Wang Yungang, OFDC: 5% of national MRLs for food product might be set as a limit for pesticide residues like the USDA does, but there may be no harvested products when an inspector visits a farm. Instead the standard may require investigation after detection of pesticide residue in the crops.

Comment Akiko Nicholls, Australia Certified Organic: We already have MRL set by the government in Australia and we use 10% of the MRL as the maximum level for organic. I cannot comment on other countries as I believe the situation could be different. If IFOAM would like to have this standard being utilized by various international agencies, setting contamination levels could be an interruption for some agencies to join the family standard.

Response: The IFOAM Standard is not the basis for joining the IFOAM Family of Standards: that is the role of the COROS.

Comment David Gould: Do not set limits – too variable globally, and not enough sound science to back many of them up. Devolve to national legal limits. If specifying further, the guidance should be toward checking whatever the locally known risks are – could be heavy metals in some areas, certain pesticides in others, combinations of these, etc. Having categories of contaminants as a way to describe them is not a bad idea.

Comment FiBL and Demeter Switzerland: The requirement should rather stay, but this should be linked to some interpretation guidelines, where for example it could be required that specific analysis have to be made, if there is a risk of contamination with a key pollutant, e.g. as the rule regarding copper use limited in a rolling average over 5 years. For certain contaminants like heavy metals there might be some indicative levels recommended, which are known from research, that they have a significant negative impact on soil life or the risk of an uptake in food is given.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): Again, appropriate measures probably vary from country to country and for diverse cultures.

Comment Christian Pein, Gäa e.V.: For inputs this could be implemented, looking for instance at brought-in compost and their heavy metal contents. Other contamination levels are out of control of the farmer unless they are all equipped with analytic equipment. This is not a practical solution from our point of view.

Comment NASAA: At a minimum IFOAM should set levels for heavy metals in fertilizers and soil conditioners with allowance for regional variations.

Comment ICS: Guidelines should be established to assess the risk of contamination to organic operations. Residue levels of prohibited substances should be set at a small percentage of the tolerance level for conventional crops as determined by IFOAM membership.

Response: we leave the requirement as it is but move it to before 4.6.1. We will not set limits.

4.7 *Breeding of organic varieties*

Note/question from the committee: The Draft Plant Breeding Standards in the IBS 2005 was brought into this standard, in accordance with the approved 2008 GA motion “Complete work on the draft plant breeding standards as soon as possible with the view of adopting them as IFOAM (certification) standards.” The idea of this section is that organic plant breeding is an activity with the goal to develop new “organic” varieties particularly suitable for organic production systems, and that organic plant breeding should have a holistic approach that respects natural crossing barriers and is based on fertile plants that can establish a viable relationship with the living soil. Requirements in the old draft plant breeding standard can now be found partly under section 4.1. “Choice of Crops and Varieties and propagation of planting materials” and partly under section 4.7 “Breeding of organic varieties”. The committee, with input from organic plant breeding experts, and taking into account the discussion at the last organic plant breeding conference in Santa Fe, worked to improve the requirements. In that process it was decided that there be no positive list of allowed organic plant breeding methods, as this would restrict innovation, whereas in fact only genetic engineering and irradiation are methods of breeding clearly incompatible with the organic principles at this stage.

Comment Diana Callear, Afrisco Certified Organic: This is fine. In fact, there is a suggestive list in 4.1, and this is probably adequate to guide ordinary farmers.

Comment Paddy Doherty: Agree with the experts on this.

Comment Wang Yungang, OFDC: agree.

Comment Gunnar Rundgren, GroLink AB: Regardless of what the organic plant breeding standards are, most important is that there is not ANY link to that organic producers have to use varieties developed with organic plant breeding, as little as they have to use organic fuel in their tractors or wear organic cotton...It is simply premature. It is already a mess in most countries with organic seed and to even start making the link to organic varieties is just no good.

Response: the link is made only as a recommendation. We feel that it is good to encourage the production of organic varieties: if the organic farmers don't buy them, who will?

Comment David Gould: I agree with this approach.

Comment FiBL and Demeter Switzerland: we agree with the proposed IFOAM standards 4.7 breeding for organic varieties. There is still an ongoing discussion about

the breeding techniques but this was the minimal agreement at that time. The standards might be further developed in the near future. There is an inconsistency in the definition of “Genetic Engineering” in the IFOAM Standards and the COROS definition, that need to be harmonized (change the COROS definition)!

Response: that inconsistency has been addressed.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): In the US, organic seed production is still in the early stages of development. While quality has improved, there are still many instances where such items as organic seed potato are of poor quality and limited quantity. There are many varieties of vegetables that are not yet available in organic form. There should be a long phase-in period, perhaps as much as 10 years, before all producers are required to use organic seed.

Comment Christian Pein, Gäa e.V.: No experience so far

Comment NASAA: Agreed, that organic breeding selection criteria will optimise for organic production systems which is worthy and a plausible solution to managing pest and disease resistance through enhancing expression of genetic qualities. Are not these the goals of conventional plant breeding? There needs to be differentiation between annuals (seeds and seedlings) and propagation materials eg bud wood that will be more than 4 years before production. There needs to be recognition of the need to protect varieties through controlled systems hence the source of the material needs to be controlled.

Comment ICS: we agree.

General Principles

Organic plant breeding and variety development is sustainable, enhances genetic diversity and relies on natural reproductive ability.

Comment François Le Lagadec, InterBio Bretagne: add “Organic plant breeding is a holistic approach that respects natural crossing barriers and is based on fertile plants that can establish a viable relationship with the living soil.”

Response: agreed.

Recommendation:

Organic plant breeders may obtain plant variety protection, but organic varieties should not be patented.

Comment Gunnar Rundgren, Grolink AB: delete this recommendation and make it a requirement under 4.7.1.

Response: agreed. This is in line with the 2008 GA motion “This Assembly requires of the World Board the formulation of a clear IFOAM policy position prohibiting the

use of any permanent property patents on living organisms particularly in plants and seeds in Organic Agriculture, these being a threat to biodiversity.”

Requirements:

4.7.1 To produce organic varieties, plant breeders shall select their varieties under organic conditions that comply with the requirements of this standard.

Comment IOAS: Cannot understand what this is intended to mean particularly “select their varieties under organic conditions”.

Response: that means that the crops shall be observed under organic management as they undergo selection, so that the variety obtained shall be well adapted to organic conditions.

4.7.2 Organic plant breeders shall disclose the applied breeding techniques. To produce an organic variety, genetic engineering and irradiation is prohibited.

4.7.3 Organic plant breeder shall develop organic varieties only on the basis of genetic material that has not been exposed to genetic engineering.

Comment David Gould: “organic plant breeders” (plural). Change language to “that has not been contaminated by products of genetic engineering”. “exposed” is too subjective.

Response: agreed.

Comment François Le Lagadec, InterBio Bretagne: Bring back the positive list of acceptable breeding methods. Add another requirement “To be an organic variety, only suitable methods of breeding shall be used as used as listed appendix 5.” (note : appendix 5 = table existing in Norms 2005, Draft Standards). Over the re reading of the crop production chapter, on the basis of a comparison with the former IBS, we notice, with interest, that the Committee took in consideration a part of the text concerning organic breeding. Our contribution on this part consists in asking for the introduction, in the permanent standards, of the text and of the table built for Victoria (9 years ago) and maintained as appendix in the Norms 2005-2011 as a draft standard. We hope that the Committee is staying aware and conscious of the necessity to clearly distinguish the notion of organic seed and the notion of organic variety. The first one permitting in a short term to answer to the demand, building an organic seed from a non GMO conventional one, multiplied during a defined period of time under organic conditions. The second one issued from organic breeding and selection from seeds whose history and parents' and lineage's history respected the suitable organic breeding techniques. It seems useful to list and so to maintain the positive list of those techniques as an appendix 5 (if this existing table were not fully completed after 9 years of discussions on it, it could be completed by other suitable techniques if documented and agreed). In fact, it is useful also to write, as forbidden techniques, the ones yet known as not adapted (as if, e.g., the one motioned by Edith LvB, GA 2008, could be seen as efficiently excluded because it is written as a genetic engineering technique in our present definition of GE). But, shall we be condemned, in future, to study every new genetic and other mutant's techniques coming on the conventional seed market? and to employ genetic engineering specialists to document, one by one,

exclusions? or is it more useful now to go on showing the right way with a limitative positive list and table of suitable techniques? On our point of view, a positive table in appendix would guide the movement on what is permitted to do, writing the borders around what is permitted to be done.

Response: ok, we will bring back the positive list of plant breeding methods acceptable in organic plant breeding that was in the IBS draft plant breeding standard. We shall make effort to clear confusion about the scope of this section.

5 . ANIMAL HUSBANDRY

Comment Angela Escosteguy, Brazil: It should be specified which species will be addressed in these standards.

Response: we leave it general. As this is a global standard, we cannot begin listing all kinds of animals that may be raised on organic farms and nor can we develop detailed requirements for each species. This standard lays down the general requirements, which are up to the operator and certifier to apply as they see fit.

5.1 *Animal Management*

General Principle

Organic livestock husbandry is based on the harmonious relationship between land, plants and livestock, respect for the physiological and behavioral needs of livestock and the feeding of good-quality organically grown feedstuffs.

Requirements:

5.1.1 Landless animal husbandry systems are prohibited.

Comment Afrisco: The definition under Section B and those under this section do not clearly exclude factory farming.

Response: there is no clear definition of factory farming. If all the requirements below are met, the animals should have enough space and access to outdoor. One issue that is not regulated is the size of the production unit, which some in the organic movement would like to see regulated (e.g. maximum x animals per farm), but it is not the general approach of this standard to fix an upper limit of scale to any farming activity. The standard is generally scale-neutral, as long as the production system can comply with all the requirements.

5.1.2 The operator shall ensure that the environment, the facilities, stocking density and flock/herd size provides for the behavioral needs of the animals.

5.1.3 In particular, the operator shall ensure that the livestock has:

- a. sufficient free movement and opportunity to express normal patterns of behavior, such as space to stand naturally, lie down easily, turn around, groom themselves and assume all natural postures and movements such as stretching, perching and wing flapping;
- b. sufficient fresh air, water, feed and natural daylight to satisfy the needs of the animals;
- c. access to resting areas, shelter and protection from sunlight, temperature, rain, mud and wind adequate to reduce animal stress;

Regional or other exception at certification body discretion

In holdings which, due to their geographical location and structural constraints where it is not possible to allow free movement of animals, tethering of animals may

be allowed for a limited period of the year or of the day. In such cases, animals may not be able to turn around freely but other requirements of 5.1.3 must be fulfilled.

IOAS: Significant change as compared to IBS: Tethering becomes an acceptable concept – lack of definition in how this might be applied. Are animals tethered for 23 out of 24 hours acceptable - in other words permanently tethered except for a short exercise period while stalls are being cleaned? Needs more definition or further guidance.

Comment Afrisco: “limited period” is subjective, especially as animal welfare is a major concern in 3rd World countries! “not be able to turn around freely”: does this not restrict animal welfare? Also, the English in this box is terrible!

Comment David Gould: change to “tethering or other confinement of animals may be allowed for a limited period of the year or of the day”. Delete the last sentence. I do not support a tethering practice whereby an animal cannot turn around.

Response: We will correct the grammatical language in the exception (to “On holdings where, due to their geographical location and structural constraints, it is not possible...”) but otherwise leave it as it is. However we will add a note that animals whose management system requires tethering to make use of grazing are not considered to be in contradiction to the requirements of 5.1.3.

5.1.4 Herd animals shall not be kept in isolation from other animals of the same species. This provision does not apply to small herds for mostly self-sufficient production. Operators may isolate male animals, sick animals and those about to give birth.

5.1.5 Construction materials and production equipment that might significantly harm human or animal health shall not be used.

Comment David Gould: It would be helpful to give a few examples of what is meant here.

Response: this would need to be assessed on a case by case basis: examples would not be so useful.

Comment Afrisco: change to “materials and methods and production equipment”.

Response: agreed.

5.1.6 Operators shall manage pests in livestock housing and shall use the following methods according to these priorities:

- a. preventative methods such as disruption, elimination of habitat and access to facilities;
- b. mechanical, physical and biological methods.
- c. substances according to the Appendices of this standard;
- d. substances (other than pesticides) used in traps.

Question/note from the committee: As compared to the IBS, the committee had added a requirement (5.1.6) concerning the management of pests in livestock houses (based

on the requirements for pest management in processing facilities). The requirement, like the one for processing, allows the use of substances permitted in the Appendices of the standard (not specifying which appendix). The question to the membership is whether the committee should develop a separate appendix to regulate substances that can be used in pest control in livestock housing and in processing facilities.

Comment Diana Callear, Afrisco Certified Organic: appears adequate.

Comment Mike Smith, AsureQuality Limited: it would be good to develop two.

Comment Paddy Doherty: It would be better to have one list, applicable as appropriate.

Comment Gunnar Rundgren, Grolink AB : no. Delete point c.

Comment Wang Yungang, OFDC: 5.1.6 is acceptable.

Comment Angela Escosteguy, Brazil: Yes, it should be developed a separate appendix to regulate substances used in livestock houses.

Comment David Gould: I do not think it is necessary to have a separate section, but I wouldn't be opposed to it either.

Comment FiBL and Demeter Switzerland: a separate list is recommended as indicative list.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): A separate appendix would be helpful and clarify the requirement.

Comment Christian Pein, Gää e.V.: This should be clearly defined for each area of application, in order to have a clear definition for both farmers and processors. Experience often shows, that a farmer not engaged in on farm processing is are unlikely to look up requirements for processing facilities.

Comment NASAA: Not an issue for Aus.

Comment ICS: We would prefer one list so there is no confusion.

Response: ok, we will go with the majority of the comments and develop a separate list in appendix.

- 5.1.7** When animals are housed, the operator shall ensure that:
- a. where animals require bedding, adequate natural materials are provided;
 - d. building construction provides for insulation, heating, cooling and ventilation of the building, ensuring that air circulation, dust levels,

- temperature, relative air humidity, and gas concentrations are within levels that are not harmful to the livestock;
- e. no animals shall be kept in cages;
 - f. animals are protected from predation by wild and feral animals.

Comment David Gould: at the end of point a, add “and if of a material that is normally consumed by the animal, is certified organic”

Response: we shall add “Bedding materials that are normally consumed by the animals shall be organic”. Although that is a bit redundant with the nutrition requirement but we agree that it might be useful to repeat it here.

Comment IOAS: Although this is in the current IBS, as written it prohibits almost all organic rabbit production whose “house” is a hutch in itself a cage – clarification that cages means without an attached run would sort this out.

Response: agreed, we will rephrase e as “no animals shall be kept in closed cages”.

5.1.8 Where livestock are housed, the minimum “on-ground” density for the in-door area shall be not more than the following:

Type of animal	Maximum density
Bovine and Equine (adults)	4 m ² / animal
Ovine and caprine (adults)	1,5 m ² / animal
Porcine (> 40kg) Sow with piglets	1 m ² / animal 3 m ² / sow
Poultry (adults)	6 birds / m ²
Rabbits	0,3 m ² / animal

Comment David Gould: Chickens versus ducks versus turkeys have different space needs; I suggest adding further details.

Question/note from the committee: As compared to the IBS, the committee had added a requirement (5.1.8) fixing a minimum “on-ground” density for the in-door areas of animals. Numbers have been set as average number on a sample of various organic regulations. They have been kept simple, so not all categories of animals are covered, but at least the main ones. Members are invited to provide comments.

Comment Diana Callear, Afrisco Certified Organic: can’t comment.

Comment Mike Smith, AsureQuality Limited: fine

Comment Gunnar Rundgren, Grolink AB: This is not really workable in global standards. Live weight of The heaviest steer was eight year old ‘Old Ben’, a Shorthorn/Hereford cross weighing in at 2,140 kilograms (4,720 lb) in 1910, while a small cow in some countries reach perhaps not even 200 kg. Obviously their space requirements are very different. Or compare a giant turkey or goose with a guinea fowl.... (6 per m²). I know some standard-setters hate it, but some things simply have to be delegated to certifiers and operators to work out...

Comment Wang Yungang, OFDC: agree.

Comment Angela Escosteguy, Brazil: I did not find this requirement (5.1.7). Anyway I think it is a good idea to fix the minimum « on-ground » density for the in-door and also out-door areas of animals.

Comment FiBL and Demeter Switzerland: it is important to have a harmonised system for in-door densities, as for the time being the differences around the world are too big. This is true not only for in-house density, but also for regulations on pasturing: ruminants should be given the opportunity to pasture during vegetation period. See report on comparison of animal welfare standards and legislation, made in the EU Research project EconWelfare (www.econwelfare.eu)

Comment Christian Pein, Gää e.V.: Has been in place within our regulatory and private framework ever since.

Comment NASAA: NASAA's stocking density rates are comparable except for porcine – IFOAM – 1 sqm/animal – NASAA - .5sqm/100kg of animal – may need amendment by NASAA.

Comment ICS: regulations are adequate.

Response: we realize that this issue is not “regulatable” on a global level. Therefore we will delete this requirement completely.

5.1.9 All animals shall have unrestricted and daily access to pasture or a soil-based open-air exercise area or run, with vegetation, whenever the physiological condition of the animal, the weather and the state of the ground permit. Such areas may be partially covered. Animals may temporarily be kept indoors because of inclement weather, health condition, reproduction, specific handling requirements or at night. Lactation shall not be considered a valid condition for keeping animals in-door.

Comment Afrisco: “in-doors”.

Response: we will change it to “indoors”.

Comment FiBL and Demeter Switzerland: delete “with vegetation” and add after “covered” the sentence “During vegetation period ruminants have to get a part of their feed by grazing regularly”. IFOAM should amend the grazing text, as we consider this rule as essential for animal welfare of ruminants and makes a clear differentiation from conventional systems.

Response: this is already covered under the requirement 5.6.7: “Ruminants must be grazed throughout the entire grazing season(s).” The intention of the “with vegetation” is to prevent systems where chicken or other non-ruminant animals are only offered access to a bare soil outdoor run.

5.1.10 The maximum hours of artificial light used to prolong natural day length shall not exceed a maximum that respects the natural behavior, geographical conditions and general health of the animals. For laying hens, a minimum daily rest period of 8 continuous hours without artificial light shall be respected.

5.2 *Conversion Period*

General Principle

The establishment of organic animal husbandry requires an interim period, the conversion period. Animal husbandry systems that change from conventional to organic production require a conversion period to develop natural behavior, immunity and metabolic functions.

Requirements:

5.2.1 All the requirements of this standard for land and animals must be met for the duration of the conversion period before the resulting product may be considered as organic. Land and animals may be converted simultaneously.

5.2.2 The start of the conversion period shall be calculated from the date of application for certification.

Regional or other exception at certification body discretion

The conversion period may be calculated retroactive to the application only on the basis of sound and incontrovertible evidence of full application of the standard for a period at least as long as 4.2.3

5.2.3 Where conventional animals are converted to organic they shall undergo a onetime per animal minimum conversion period according to the following schedule. This does not preclude the need for the land to have been converted by the time of sale:

Production	Conversion Period
• Meat:	12 months
• Dairy, fibers and other non-slaughter animal products:	6 months

Comment IOAS: Omission of eggs means that existing poultry on the holding at the point of conversion may not be used to produce organic eggs. Significant change to

current IBS which requires 6 weeks under organic management and will impact on currently accredited certifiers.

Response: see below, answer to 5.3.1

Comment Afrisco: what about poultry?

Response: see below

5.3 *Animals Sources/Origin*

General Principle

Organic animals are born and raised on organic holdings.

Requirements:

5.3.1 Animals shall be raised organically from birth.

Regional or other exception at certification body discretion

When organic livestock is not available, conventional animals may be brought in according to the following age limits:

- a. 2 day old poultry;*
- e. dairy calves up to 4 weeks old that have received colostrum and are fed a diet consisting mainly of full milk.*

Comment Afrisco: simplification compared to previous and other standards is great! What about other breeds?

Comment IOAS: Significant change from current IBS which also permits bringing in of pigs and poultry. Will impact on currently accredited certifiers.

Comment IOAS: New standard – significant restriction which will impact on currently accredited certifiers. Animals brought in for breeding must spend at least six months on the organic holding (5.2.3) before the start of gestation.

Question/note from the committee: The committee had intensive (not yet conclusive) discussion on requirement 5.3.1 regarding maximum age limits to bring conventional animals in. The committee wishes to tighten the standard as compared to the IBS, considering that it is no longer acceptable to buy in conventional piglets for the purpose of selling them as organic meat and that these should be raised from birth on the organic farm itself. Other animals that cannot be raised on the farm should in principle be obtained at the youngest age or undergo the whole conversion period. However, the committee is aware of developing countries situations that make it more difficult to source very young animals, and the standard should not pose unbearable burden on these operations. The committee welcome any input on the language that is tentatively included in requirements 5.3.1 and 5.3.2.

Comment Diana Callear, Afrisco Certified Organic: cannot comment.

Comment Mike Smith, AsureQuality Limited: 5.3.2 an allowance of up to 20% for ovine would be inline with the EU Regulations and reflect situations where there is a need for destocking due to natural disaster such as drought.

Comment Paddy Doherty: I think you have done a decent job; and there is still an large loophole for regional variation.

Comment Gunnar Rundgren, GroLink AB: Basically conditions in animal keeping is very varied as well as the level of development for organic livestock, which is one of the reasons why a global certification standard doesn't make sense at all.

Comment Wang Yungang, OFDC: we suggest that the 2005 IBS requirement on origin of slaughter animals still be remained.

Comment Angela Escosteguy, Brazil: I think it should be fixed the conversion period of each animal and not the age that they enter in the farm. Following the example mentioned, if the withdrawal period for pigs is 6 months, it will be uneconomical to buy older animals.

Comment David Gould: I interpreted these requirements as IFOAM's best attempt to see more organic livestock production overall by allowing more conversion, an approach I support. That it won't meet certain government regulations is clear, and areas using such requirements as those in this draft will have to show otherwise how they can meet those stricter market requirements, but I cannot think of a better solution at this time.

Comment FiBL and Demeter Switzerland: we recommends first to make an analysis of the availability situation in different areas of the world before making any decisions. An alternative would be a standard analogue to the seed standard: conventional animals may be brought into the farm when non-availability of organic animals can be demonstrated.

Comment NASAA: Not an issue for NASAA as the National Standard only allows for animals born and raised on the certified farm to be eligible for certification for meat.

Comment ICS: Managed organically but not necessarily certified organic at birth.

Response: The committee acknowledges that there is not sufficient time now to work on a proper new language on this complicated issue. Therefore, we shall revert to the IBS language of 5.3.1, 5.2.3 and 5.3.2, and put this issue on the workplan of the committee for the future.

5.3.2 Breeding stock may be brought in from conventional farms to a yearly maximum of 10% of the adult animals of the same species on the farm.

Regional or other exception at certification body discretion

Exceptions of more than 10% may be granted, limited to the following circumstances:

- | |
|---|
| <ul style="list-style-type: none">a. <i>unforeseen severe natural or man-made events;</i>b. <i>considerable enlargement of the farm;</i>c. <i>establishment of a new type of animal production on the farm;</i>d. <i>holdings with less than 10 animals.</i> |
|---|

Female adult breeding replacements must be nulliparous and be converted to organic management prior to the start of their gestation.

5.4 Breeds and Breeding

General Principle

Breeds are adapted to local conditions.

Requirements:

- 5.4.1 Breeding systems shall be based on breeds that can reproduce successfully under natural conditions without human involvement.
- 5.4.2 Artificial insemination is permitted.
- 5.4.3 Embryo transfer techniques and cloning are prohibited.
- 5.4.4 Hormones are prohibited to induce ovulation and birth unless applied to individual animals for medical reasons and under veterinary supervision.

5.5 Mutilations

General Principle

Organic farming respects the animal's distinctive characteristics.

Requirements:

- 5.5.1 Mutilations are prohibited.

Regional or other exception at certification body discretion

- | |
|--|
| <p><i>The following exceptions may be used only if animal suffering is minimized and anesthetics are used where appropriate:</i></p> <ul style="list-style-type: none">a. <i>castrations;</i>b. <i>tail docking of lambs;</i>c. <i>dehorning;</i>d. <i>ringing;</i>e. <i>mulesing only for breeds that require mulesing.</i> |
|--|

Comment David Gould: Why not include toe-clipping of turkeys and teeth clipping of swine? Seems arbitrary to not. Change to “mulesing only for breeds and geographic regions that require mulesing”.

Response: this is a carry over from the IBS, which was approved by the IFOAM membership. Probably no dossier had been submitted to request that these other mutilations be also allowed. We will not add them unless we get a specific and well substantiated request that this is absolutely necessary in some organic operations. We mean mulesing (not “mulesing”!). We do not feel that limiting it to “only breeds and geographic regions that require mulesing” is necessary as there is no “recreational mulesing”: operators don’t do it unless necessary!

Comment Afrisco: Mulesing is an horrendous operation. It should be carried out under anesthesia and with suitable post-operative wound care, or using bloodless methods. Further, there should be a requirement that organic sheep farmers must adopt a breeding program to ensure that non-pleated animals are used. This should be achieved within a pre-defined period.

Response: We agree that mulesing needs to be phased out. We shall change point e to “e. Mulesing is permitted until December 31, 2015”.

5.6 *Animal Nutrition*

General Principle

Organic animals receive their nutritional needs from organic forage and feed of good quality.

Requirements:

5.6.1 Animals shall be fed organic feed.

Regional or other exception at certification body discretion

Operators may feed, until 31st December 2014, a limited percentage of non-organic feed under specific conditions in the following cases:

- a. organic feed is of inadequate quantity or quality;*
- b. areas where organic agriculture is in early stages of development;*
- c. grazing of non-organic grass or vegetation during seasonal migration.*

In no such case may the percentage of non-organic feed exceed 5% dry matter per animal calculated on an annual basis.

Operators may feed non-organic feed under specific conditions for a maximum of 10 days in the following cases:

- a. unforeseen severe natural or man-made events;*
- b. extreme climatic or weather conditions.*

Comment David Gould: add at the end of point c “No non-organic feed may be a product of genetic engineering”.

Response: this would be redundant with requirements in section 2.3. However, we will add “animal feed” to the lists of inputs in 2.3.2.

Comment IOAS: Significant change as compared to IBS: introduction of firm time limit and reduction of % non organic feed to 5% i.e. reduction by 50% which may considerably impact on currently accredited certification bodies.

Question/note from the committee: The committee had set a precise time limit for the use of non-organic feed (31st Dec 2014) and otherwise limited emergency non-organic feeding to a maximum period of 10 days, in requirement 5.6.1. This time limit of 10 days has been chosen based on the Canadian standard and is intended to allow the operator to source organic feed from other regions or to make decisions such as slaughtering his livestock.

Comment Diana Callear, Afrisco Certified Organic: Organic feed is VERY difficult in developing countries, because you can't buy it, and few farms can produce both feed and livestock (which are usually kept in different parts of dry countries). So there is little organic dairy production, and other livestock production is also low. The same will apply to aquaculture. So your questions are really for producers in the north, not for us. “until 31st December 2014”: What about countries where organic agriculture is adopted from 2015 onwards? There is a contradiction between this and the next “discretion” box. “limited percentage”: What is this limited period? “maximum of 10 days”: This does not take cognizance of production in arid and semi-arid regions! Alternatively, there should be a mechanism whereby organic animals may lose their certification under these circumstances and may then be converted back to organic status the following season when the environment has recovered from these events and conditions. There is a contradiction between this and the next “discretion” box.

Comment Mike Smith,ASUREQuality Limited: If herbivores needed non-organic feed due to severe natural events such as drought then 10 days would not be long enough to re-establish organic feed on the farm, or to bring in certified feed from off the farm. This is due to geographical reasons as in a severe situation there wouldn't be enough unaffected production to provide an alternative supply.

Comment Gunnar Rundgren, GroLink AB: See comment above about the "trade deal" nature of this standard... It is absolutely clear that any country where organic livestock is fairly new there will be the same problems as have been experienced in Europe and North America, and there is no way operators can do anything about this beforehand. First the volume need to grow so that there is a market created for organic feed. Yes international trade is possible, but for such a trade to work there must already be a certain volume of organic livestock. But that volume can never be reached if standards are too limited. Delete “until 31st of December 2014”. Replace 5 % by 20%.

Comment Wang Yungang, OFDC: I agree with the 5% non-organic feed limit.

Comment Akiko Nicholls, Australia Certified Organic: 5% is reasonable. However, from Australian situation, our operator may not be able to comply with “up to 10days” requirement during severe draught.

Comment David Gould: Not too strict, in my opinion.

Comment FiBL and Demeter Switzerland: in some Eastern European countries the 5 % restriction is still relatively tight. Although the direction to go is correct, active solutions should be envisaged to facilitate the reduction in particular for the valuable protein sources for non-ruminants.

Comment Christian Pein, Gäa e.V.: Please no definition of time limits (10 days) in case of emergency, as inspection authorities in the EU will allow conventional feed without this strict limitation in case of dry seasons on basis of EU regulation 834/2007 Article 22 and a private certifier will not have a chance to come up with the recommended 10 days. In the end we will have certified EU organic but non compliant private organic for one operator, too confusing.

Comment NASAA: This standard allows for an additional derogation of 10 days non-organic feed to allow the producer to source organic feed or make other decisions. This standard should also allow for regional variances. NASAA has a derogation that there may be feeding of conventional livestock (free from contaminants) – these animal need to be fed organic feed for a period of 6 months before achieving organic status.

Response: we shall change the language of the exception box to
“Operators may feed a limited percentage of non-organic feed under specific conditions in the following cases:

- a. organic feed is of inadequate quantity or quality;
- b. areas where organic agriculture is in early stages of development;
- c. grazing of non-organic grass or vegetation during seasonal migration.

In no such case may the percentage of non-organic feed exceed 10% dry matter per ruminant and 15% dry matter per non-ruminant calculated on an annual basis.

Operators may feed non organic feed for a limited time under specific conditions, following extreme weather conditions or man made or natural disasters beyond the control of the operator”

5.6.2 Animals shall be offered a balanced diet that provides all of the nutritional needs of the animals in a form allowing them to exhibit their natural feeding and digestive behavior.

5.6.3 The prevailing part (at least more than 50%) of the feed shall come from the farm unit itself, surrounding natural grazing areas, or be produced in co-operation with other organic farms in the region.

Regional or other exception at certification body discretion

Exceptions may be permitted in regions where organic feed production is in an early stage of development or temporarily deficient, or in cases of unpredictably low crop production on the farm or in the region.

5.6.4 For the calculation of feeding allowances only, feed produced on the farm unit during the first year of organic management may be classed as organic. This

refers only to feed for animals that are being produced within the farm unit. Such feed may not be sold or otherwise marketed as organic.

- 5.6.5 The following substances are prohibited in the diet:
- a. farm animal byproducts (e.g. abattoir waste) to ruminants;
 - b. slaughter products of the same species;
 - c. all types of excrements including droppings, dung or other manure;
 - d. feed subjected to solvent extraction (e.g. hexane) or the addition of other chemical agents;
 - e. amino-acid isolates;
 - f. urea and other synthetic nitrogen compounds;
 - g. synthetic growth promoters or stimulants;
 - h. synthetic appetizers;
 - i. preservatives, except when used as a processing aid;
 - j. artificial coloring agents.

Comment IOAS: There has long been controversy about what is meant by amino acid isolates – should be added to definitions.

Response: ok, we will add a definition for it.

- 5.6.6 Animals may be fed vitamins, trace elements and supplements from natural sources.

Regional or other exception at certification body discretion

Synthetic vitamins, minerals and supplements may be used when natural sources are not available in sufficient quantity and quality.

- 5.6.7 All ruminants shall have daily access to roughage. Ruminant must be grazed throughout the entire grazing season(s).

Regional or other exception at certification body discretion

Ruminants may be fed with carried fresh fodder where this is a more sustainable way to use land resources than grazing. Animal welfare shall not be compromised.

Comment Afrisco: add “s” to ruminant

Response: agreed.

Comment IOAS: Although in the current IBS, this comes perilously close to permitting feed lots. Carried fresh fodder is **always** more sustainable than grazing because no fodder is wasted by trampling/dunging resulting from the presence of the animals on the grazed fields.

Comment Afrisco: “more sustainable”: very subjective, opening the door for “organic factory farming”. Sustainability parameters need to be defined.

Response: we will change the language in the exception box to “Ruminants may be fed with organic carried fresh fodder during the grazing season where weather and soil conditions do not permit grazing. The organic carried fresh fodder shall not

exceed 20% of the amount of forage grazed during the grazing season. Animal welfare shall not be compromised”.

5.6.8 Fodder preservatives such as the following may be used:

- a. bacteria, fungi and enzymes;
- b. by-products of food industry (e.g. molasses);
- c. plant based products.

Regional or other exception at certification body discretion

Synthetic chemical fodder preservatives such as acetic, formic and propionic acid and vitamins and mineral are permitted in severe weather conditions.

Comment David Gould: point b should read “certified organic by-products of food industry...”.

Response: We disagree: this goes against the comment of David Eboku that reference to certification should be removed as much as possible from this standard. We shall rephrase point b to “Natural products of food industry”. We delete the molasses example.

Comment Afrisco: “minerals” (plural)

Response: agreed, but see below.

Comment IOAS: Do not understand why vitamins and minerals are included here as they are not fodder preservatives and are already addressed at 5.6.6

Response: Some of them may be used as fodder preservative (e.g. salt). We will remove vitamins and minerals from the exception box, and add a point d “d. Vitamins and minerals subject to the order of preference in 5.6.6.”.

5.6.9 Young stock from mammals shall be provided maternal milk or organic milk from their own species and shall be weaned only after a minimum period as specified below:

- a. Calves and foals: 3 months
- b. Pigs: 6 weeks
- c. Lambs and kid: 7 weeks

Regional or other exception at certification body discretion

*Operators may provide non-organic milk when organic milk is not available.
Operators may provide milk replacers or other substitutes only in emergencies provided that they do not contain antibiotics, synthetic additives or slaughter products.*

Comment Afrisco: “weaned only after a minimu...”: Good simplification! “kids” (plural).

Response: agreed with the “kids”. Also, we shall replace “pigs” by “piglets”.

Comment David Gould: I do not support this first sentence in the text box. Delete it and rephrase the second sentence as “Operators may provide organic milk replacers...”.

Response: We shall remove the entire exception, because milk replacers are anyway byproducts of the conventional milk industry, so they cannot be more acceptable than non-organic milk.

5.7 *Veterinary Medicine*

General Principle

Organic management practices promote and maintain the health and well-being of animals through balanced organic nutrition, stress-free living conditions and breed selection for resistance to diseases, parasites and infections.

Requirements:

- 5.7.1** The operator shall take all practical measures to ensure the health and well being of the animals through preventative animal husbandry practices such as:
- a. selection of appropriate breeds or strains of animals;
 - b. adoption of animal husbandry practices appropriate to the requirements of each species, such as regular exercise and access to pasture and/or open-air runs, to encourage the natural immunological defense of animal to stimulate natural immunity and tolerance to diseases;
 - c. provision of good quality organic feed;
 - d. appropriate stocking densities;
 - e. grazing rotation and management.
- 5.7.2** If an animal becomes sick or injured despite preventative measures, that animal shall be treated promptly and adequately, if necessary in isolation and in suitable housing. Operators shall use in priority natural medicines and treatments, including homeopathy, Ayurvedic medicine and acupuncture whenever appropriate.

Comment IOAS: “whenever appropriate” introduces complete subjectivity. Would be sufficient to state that natural medicines and treatments are to be used as a preference. This is already included in the regional variation at 5.7.3.

Response: agreed, we will delete “whenever appropriate” and rephrase as “operators shall give preference to ...”.

- 5.7.3** Use of chemical allopathic veterinary drugs or antibiotics will cause the animal to lose its organic status. Producers shall not withhold such medication where doing so will result in unnecessary suffering of the livestock.

Regional or other exception at certification body discretion

The animal may retain its organic status if:

- a. *the operator can demonstrate compliance with 5.7.1, and*

- b natural and alternative medicines and treatments are unlikely to be effective to cure sickness or injury, or are not available to the operator, and*
- b. the chemical allopathic veterinary drugs or antibiotics are used under the supervision of a veterinarian, and*
- c. withdrawal periods shall be not less than double of that required by legislation, or a minimum of 14 days, whichever is longer.*

Comment David Gould: there should be a maximum number of times that this is allowed for any given animal, if not for the farming unit as a whole.

Response: agreed, we will add “d. this exception is not granted more than 3 times on a given animal”. This is in accordance with the EU reg, still “lower” than the US reg, and we do not expect it to pose disproportionate problems to DC countries.

Comment Afrisco: Should we not have a limit on the use of anti-biotics for the treatment of disorders that may be induced by bad management, such as mastitis?

Response: in the case of bad management that induces the disorder, the operator would not be granted the exception in the first place, because he could not demonstrate compliance with 5.7.1. So his animals would lose organic status immediately.

Question/note from the committee: The committee lifted the withdrawal period for antibiotics and other allopathic drugs to “14 days or double legislation, whichever is longer”. This is stricter than in the IBS, which required only 48 hours, but is a better middle ground between the EU approach (48 hours) and the US approach (one generation: an animal treated with antibiotics can never be sold as organic again!). 14 days is the value in the Canadian regulation.

Comment Diana Callear, Afrisco Certified Organic: sounds sensible.

Comment Mike Smith,ASUREQuality Limited: Prefer no change.

Comment Paddy Doherty: Something you can do is make this a derogation. The proper standard would be as the US, but realising that this is not politically feasible, add a derogation to allow the 14 days thing. Then say that this criterion will be reviewed at (whenever).

Response: that is already a derogation (it is in the exception box).

Comment Gunnar Rundgren, GroLink AB: Again the trade deal reasoning. ...

Comment Wang Yungang, OFDC: agree.

Comment Akiko Nicholls, Australia Certified Organic: Antibiotics should not be permitted and should not have any exceptions.

Comment Angela Escosteguy, Brazil : (i) I agree with the proposal for 14 days or double Legislation, whichever is longer. (ii) I believe that other chemical drugs like the dewormers should have the withdrawal period established as well. Some studies indicate that residues of ivermectins are found in meat after more than 60 days after application. (iii) Also on this issue, I have a comment regarding the use of the word "allopathic". Be careful not to confuse mode of action with the product origin.

Allopathic or homeopathic - refer to the way the active principle acts in the body. Allopathic mean action against the former pathogen or the symptoms ex. antibiotics, antipyretics, anti-worms. The homeopathic products have the same action, that is causing the same symptoms in healthy individuals.

So there are herbal allopathic, in the case of plants with anthelmintic action, or anti-inflammatory or anti heat. They are allopathic and allowed in organic systems.

What determines whether a product can be used or not is his origin, not its form of action. Prohibited products are synthetic chemical products.

Tip: Instead saying allopathic drug, we should say synthetic chemical drugs.

Response: yes, actually the standard is more precise than our question in that regard: it says “chemical allopathic veterinary drugs”.

Comment David Gould: I favor the US approach – it has proven to be practical – and if the US producers can do it, I would think probably all of the others can as well.

Comment FiBL and Demeter Switzerland: no comment, as we follow the double withholding period.

Comment Christian Pein, Gäa e.V.: This will definitive cause problems for non NOP dairy producers who would under EU regulation come back into organic milk production already after 2 days. In case of the recommended 14 days the would have to ”dump” the milk for this period of time and would not be able to deliver. Organic dairys would likely get into changing their contractual agreements with farmers in order to have a clause implemented to drop those farmers. On top a dairy farmer would not be able to use the milk for feeding other animals on farm or even sell the milk conventional.

Comment NASAA: NASAA and the National Standard are the same as the US – the animal loses certification for meat – by products can be bought back in.

Comment ICS: we would agree.

Response: there are obviously very diverging opinions on this and the US and EU approaches cannot be reconciled anyway. We keep the 14 days value and hope this will encourage political harmonization in the future, because there is no scientific or technical reason for such differences in standards.

5.7.4 Substances of synthetic origin used to stimulate production or suppress natural growth are prohibited.

5.7.5 Vaccinations are allowed only in the following cases:

- a. when an endemic disease is known or expected to be a problem in the region of the farm and where this disease cannot be controlled by other management techniques, or
- b. when a vaccination is legally required.

5.8 *Transport and Slaughter*

General Principle

Organic animals are subjected to minimum stress during transport and slaughter.

Requirements:

5.8.1 Animals shall be handled calmly and gently during transport and slaughter.

5.8.2 The use of electric prods and other such instruments is prohibited.

Comment David Gould: add “except in exceptional situations where human safety is in imminent danger”.

Response: The committee discussed this comment extensively, and could not reach a consensus. Committee vote was in favor of keeping the language as it is, with the reasons that: 1) it is not enforceable and possible for the inspector to assess whether the use is regular or exceptional as long as the tool is on the farm. 2) The EU regulation does not allow it, so for the sake of equivalence, this is easier.

Comment FiBL and Demeter Switzerland: This is a very good idea, but difficult to implement in conventional slaughterhouses. Should be promoted!

Comment Afrisco: Unless required to ensure the safety of the animals and human handlers: for example in the case of a “downed animal”.

Response: see response above.

5.8.3 Organic animals shall be provided with conditions during transportation and slaughter that reduce and minimize the adverse effects of: stress, loading and unloading, mixing different groups of animals, extreme temperatures and relative humidity. The type of transport shall meet the specific needs of the species being transported.

5.8.4 The operator shall ensure an adequate food and water supply during transport and at the slaughterhouse.

5.8.5 Animals shall not be treated with synthetic tranquilizers or stimulants prior to or during transport.

5.8.6 Each animal or group of animals shall be identifiable at each step in the transport and slaughter process.

5.8.7 Slaughterhouse journey times shall not exceed eight hours.

Regional or other exception at certification body discretion

When there is no certified organic slaughterhouse within eight hours travel time, an animal may be transported for a period in excess.

Comment Afrisco: “in excess thereof”. While this relaxation is acknowledged, there should be some guidelines to prevent the abuse of discretionary clause.

Response: we will rephrase to “When there is no certified organic slaughterhouse within eight hours travel time, an animal may be transported for a longer period if the animals are given a rest period and access to water.”

5.8.8 Those responsible for transportation and slaughtering shall avoid contact (sight, sound or smell) of each live animal with dead animals or animals in the killing process.

Comment IOAS: Significant change: Although desirable from an animal welfare point of view, sufficiently isolating animals in lairage so that they cannot smell or hear animals in the process of slaughter is likely to be impossible in some instances/regions depending on the sophistication of the slaughter house.

Response: “avoid” is still a rather flexible term.

5.8.9 Each animal shall be stunned before being bled to death. The equipment used for stunning shall be in good working order.

Regional or other exception at certification body discretion

Exceptions can be made according to cultural or religious practice. Where animals are bled without prior stunning this should take place in a calm environment.

Comment David Gould: “stunned insensate before...”

Response: the issue here is the effectiveness of the stunning. We shall rephrase the requirement into: “Each animal shall be effectively stunned before being bled to death. The equipment used for stunning shall be in good working order.”

Comment IOAS: New standard but the exception for “cultural” practice will mean that the exception can be applied whenever and/or wherever a CB wishes. Cultural practice is a subjective assessment and a “let out” clause easily applied.

Response: we agree. We could not find examples of where a cultural but not religious practice would be so important to keep that it would require an exception. Therefore, we will remove “cultural or” from the exception, since “cultural” is subject to too many interpretations. At least religious practices are clearly defined.

5.9 Bee Keeping

General Principle

Bee keeping is an important activity that contributes to enhancement of the agriculture and forestry production through the pollinating action of bees.

Requirements:

5.9.1 Hives shall be situated within a radius of at least 3 kms that consist of organically managed fields, uncultivated land and/or wild natural areas in a

way that ensures access to sources of honeydew, nectar and pollen that meets organic crop production requirements sufficient to supply all of the bees' nutritional needs.

Comment Afrisco: change to “The areas within a 3 km radius of the hives shall consist of...”.

Response: agreed.

5.9.2 The operator shall not place hives within foraging distance (5 kms) of fields or other areas with a high contamination risk (e.g. conventional fields, industrial zones and highways).

Comment David Gould: replace “conventional” by “non-organic”: “Non-organic” is more inclusive of GMO as well as traditional conventional production.

Response: conventional is actually defined in the definition section by not organic or not “organic in conversion”. Therefore, it is an appropriate term to use here.

Comment Afrisco: “within a foraging”.

Response: agreed.

5.9.3 The hives shall consist primarily of natural materials and present no risk of contamination to the environment or the bee products. Use of construction materials with potentially toxic effects is prohibited.

5.9.4 At the end of the production season, hives shall be left with reserves of honey and pollen sufficient for the colony to survive the dormancy period. Any supplementary feeding shall be carried out only between the last honey harvest and the start of the next nectar or honeydew flow period. In such cases, organic honey or organic sugar shall be used.

Comment David Gould: The way this is originally written has the second sentence contradicting the first. Change to “Any otherwise unexpected need for supplementary feeding...”.

Response: ok, but for grammatical reasons we will change it to “Any supplementary feeding in response to unexpected need shall be...”

Comment IOAS: Significant change is the requirement that supplementary feeding must be *organic* sugar or honey. In some areas organic sugar may not be available and if supplementary feeding is required for the hives, it is unlikely the beekeeper will have access to organic honey of his own and it may also not be available from anywhere else. This standard is likely to adversely affect beekeepers which are in regions where there is not a developed market for these commodities in organic form.

Response: this is a matter of planning. In regions where this emergency feeding need might occur, operators shall keep reserves of their organic honey to cover for such cases.

5.9.5 Bee colonies may be converted to organic production. Introduced bees shall come from organic production units when available. Bee products may be sold

as organically produced when the requirements of this standard have been complied with for at least one year.

- 5.9.6** During the conversion period, the wax shall be replaced by organically produced wax, except where no prohibited products have been previously used in the hive and where is no risk of contamination of wax. In cases where all the wax cannot be replaced during a one-year period, the conversion period shall be extended to cover the full replacement of the wax.
- 5.9.7** For pest and disease control the following are permitted:
- a. lactic, formic acid;
 - b. oxalic, acetic acid;
 - c. sulfur;
 - d. natural essential oils (e.g. menthol, eucalyptol, camphor);
 - e. *Bacillus thuringiensis*;
 - f. steam, direct flame and caustic soda for hive disinfection.

Comment Afrisco: put *Bacillus thuringiensis* in italics.

Response: agreed.

- 5.9.8** Where preventative measures fail, veterinary medicinal products may be used provided the following are adhered to:
- a. preference is given to phyto-therapeutic and homeopathic treatment;
 - b. if allopathic chemically synthesized medicinal products are used, the bee products shall not be sold as organic;
 - c. treated hives shall be placed in isolation and undergo a conversion period of one year.
- 5.9.9** The practice of destroying the male brood is permitted only to contain infestation with *Varroa* (mites).
- 5.9.10** The health and welfare of the hive shall be primarily achieved by hygiene and hive management.
- 5.9.11** The destruction of bees in the combs as a method of harvesting of bee products is prohibited.
- 5.9.12** Mutilations, such as clipping of the wings of queen bees, are prohibited.
- 5.9.13** Artificial insemination of queen bees is permitted.
- 5.9.14** The use of chemical synthetic bee repellents is prohibited. The use of smoke should be kept to a minimum. Acceptable smoking materials should be natural or from materials that meet the requirements of these standards.
- 5.9.15** Honey temperatures shall be maintained as low as possible, and not exceed 45°C, during the extraction and processing of products derived from bee keeping.

6 . AQUACULTURE PRODUCTION STANDARDS

6.1 *Conversion to Organic Aquaculture*

General Principle

Conversion in organic aquaculture production reflects the diversity of species and production methods.

Comment FiBL and Demeter Switzerland: That means OA fulfills the complex demands of the complete variety of species and production methods meanwhile also fulfilling the IBS in terms of environment-, animal-, and consumers interests. Why don't we add this?

Response: we do not see this as belonging to the general principle governing conversion to organic aquaculture.

Requirements:

6.1.1 Operators shall comply with all the relevant general requirements of chapters 3 and 5.

Comment IOAS: Although in the current IBS, this reference to relevant is entirely subjective and does cause problems.

Response: yes, we realized that and agree that the best option would be to figure out which of the requirements in section 3 and 5 are actually "relevant" and clearly spell them out here, but we also realize that the committee does not currently have the expertise to handle this area. Therefore, we will put it on the future work plan of the committee for a later revision of the standard.

6.1.2 The conversion period of the production unit shall be at least one life cycle of the organism or one year, whichever is shorter.

6.1.3 Operators shall ensure that conversion to organic aquaculture addresses environmental factors, and past use of the site with respect to waste, sediments and water quality.

6.1.4 Production units must be located at an appropriate minimum distance from contamination sources and conventional aquaculture.

Comment FiBL and Demeter Switzerland : We think there should also be some issues concerning parallel production e. g. separate water sources, minimum distances between production units or separated sites for conventional and organic parts of a fish farm. Excluding parallel production completely, is out of production reality of many European countries.

Response: the committee will take up this issue with relevant experts in a future revision of the standard.

6.2 *Aquatic Ecosystems*

General Principle

Organic aquaculture management maintains the biodiversity of natural aquatic ecosystems, the health of the aquatic environment, and the quality of surrounding aquatic and terrestrial ecosystem.

Requirements:

6.2.1 Aquatic ecosystems shall be managed to comply with relevant requirements of chapter 2.

Comment IOAS: Same comment as 6.1.1 – subjective as to which requirements are relevant.

Response: same response.

6.2.2 Operators shall take adequate measures to prevent escapes of introduced or cultivated species and document any that are known to occur.

6.2.3 Operators shall take verifiable and effective measures to minimize the release of nutrients and waste into the aquatic ecosystem.

6.2.4 Fertilizers and pesticides are prohibited unless they appear in Appendices 2 and 3.

6.3 *Aquatic Plants*

General Principle

Organic aquatic plants are grown and harvested sustainably without adverse impacts on natural areas.

Requirements:

6.3.1 Aquatic plant production shall comply with the relevant requirements of chapters 2 and 4.

Comment IOAS: Same comment as 6.1.1 – subjective as to which requirements are relevant.

Response: same response.

6.3.2 Harvest of aquatic plants shall not disrupt the ecosystem or degrade the collection area or the surrounding aquatic and terrestrial environment.

6.4 Breeds and Breeding

General Principle

Organic animals begin life on organic units.

Comment FiBL and Demeter Switzerland: There should be added something like: “for species popular in OA and available from organic sources”.

Response: this “derogation” is not necessary in the principle, but is definitely allowed in the requirements. Moreover, we will specify “aquatic” animals throughout this section, to avoid confusion.

Requirements:

6.4.1 Animals shall be raised organically from birth.

Regional or other exception at certification body discretion

When organic animals are not available, brought-in conventional animals shall spend not less than two thirds of their life span in the organic system.

When organic stock is not available, conventional sources may be used. To promote and establish the use of organic stock, the certification body shall set time limits for the selected use of non-organic sources.

6.4.2 Operators shall not utilize artificially polyploid organisms or artificially produced monosex stock.

Comment FiBL and Demeter Switzerland: This should also refer to so-called supermales. These fish are offspring of hormonally manipulated parents and produce only male offspring themselves when mated with normal females. That means this all-male offspring is produced on natural manner but the basis in their grandparents is genomic manipulation.

Response: ok, we shall explore with the aquaculture experts what is the right language to use here (if the use of supermales are not already covered under artificially produced monosex stock).

6.4.3 Aquatic animal production systems shall use breeds and breeding techniques suited to the region and the production method.

Comment FiBL and Demeter Switzerland: What is behind that? In some regions e. g. carp reproduction is only possible with the administration of hypophysis extracts (because of low average temperatures). This is nothing else as artificial hormonal induced propagation. And this is prohibited (5.7.4 and 6.6.4). But following 6. 4. 3.

this could be done in organic carp production if it is popular in the region (e.g. Northern Bavaria). To our opinion there is a point 6.4.4. needed as suggested.

Response: we do not understand the suggestion. Relevant requirements in section 5 apply anyway, and this is one of them.

Comment IOAS: consistent to requirement for other types of livestock.

6.5 *Aquatic Animal Nutrition*

General Principle

Organic aquatic animals receive their nutritional needs from good quality, organic sources.

Requirements:

6.5.1 Animals shall be fed organic feed.

Regional or other exception at certification body discretion

Operators may feed, up to 31st December 2014, a limited percentage of non-organic feed under specific conditions for a limited time in the following cases:

- a. organic feed is of inadequate quantity or quality;*
- b. areas where organic aquaculture is in early stages of development.*

In no case may the percentage of non-organic feed exceed 5% dry matter calculated on an annual basis.

Comment David Gould: add after the last sentence of the textbox, “no non-organic feed may be a product of genetic engineering”.

Response: same response as for 5.6.1, this would be redundant with requirements in section 2.3. However, we will add “animal feed” to the lists of inputs in 2.3.2.

Question/note from the committee: With regards to aquatic animals, the committee also tightened the requirements related to allowance of non-organic feed, using the same model as for other animals. The committee is of the opinion that organic fish production should rely on an entirely organic production chain, and not on other systems such as so-called “sustainable fisheries”. The committee would like to ask the membership whether the maximum of 5% non-organic feed is too strict.

Comment Mike Smith, AsureQuality Limited: no comment

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): No, 5% is enough.

Comment IOAS: Introduction of specific time limit; reduction in % dry matter of feed from 15% to 5%. This is a significant restriction for currently accredited CBs and will

bring most out of compliance. In some cases it is almost certain that this requirement cannot be complied with and therefore there will be a consequent reduction of the number of IFOAM accredited aquaculture operations.

Comment ICS: No.

Response: in the absence of other comments, we leave it as it is.

6.5.2 The dietary requirements for aquatic animals shall comply with the requirements of 5.6.4 and 5.6.5.

Comment FiBL and Demeter Switzerland: Regarding the addition of artificial colorants in the diet: Is Pfaffia yeast seen as artificial? It is widely used in diets for salmonids mainly to satisfy consumers anticipations. This refers also to organic salmon and big rainbow trout.

Response: at the moment, it is left to the certifiers to interpret this standard. If a general need arises for harmonization of interpretation, the committee could develop further guidelines in the future, with the involvement of appropriate experts.

6.5.3 Use of water containing human excrement is prohibited.

Comment IOAS: not likely to have an effect as in this case human excrement is considered a contaminant which is already covered.

Response: ok, but it does not harm.

6.6 Aquatic Animal Health and Welfare

General Principles

Organic management practices promote and maintain the health and well-being of animals through balanced organic nutrition, stress-free living conditions appropriate to the species and breed selection for resistance to diseases, parasites and infections.

Requirements:

6.6.1 Operators shall comply with relevant requirements of section 5.7.

Comment IOAS: Same comment as 6.1.1 – subjective as to which requirements are relevant. In this case one would presume that ALL are relevant.

Response: same response.

6.6.2 Prophylactic use of veterinary drugs is prohibited.

6.6.3 Operators must use natural methods and medicines, as the first choice, when treatment is necessary. Use of chemical allopathic veterinary drugs and antibiotics is prohibited for invertebrates.

- 6.6.4 Synthetic hormones and growth promoters are prohibited for use to artificially stimulate growth or reproduction.
- 6.6.5 Stocking densities do not compromise animal welfare.
- 6.6.6 Operators shall routinely monitor water quality, stocking densities, health, and behavior of each cohort (school) and manage the operation to maintain water quality, health, and natural behavior.

6.7 *Aquatic Animal Transport and Slaughter*

General Principle

Organic animals are subjected to minimum stress during transport and slaughter.

Requirements:

- 6.7.1 Operators shall comply with relevant requirements of section 5.8.

Comment IOAS: Same comment as 6.1.1 – subjective as to which requirements are relevant.

Response: same response.

- 6.7.2 The operator shall handle live organisms in ways that are compatible with their physiological requirements.
- 6.7.3 Operators shall implement defined measures to ensure that organic aquatic animals are provided with conditions during transportation and slaughter that meet animal specific needs and minimize the adverse effects of:
 - a. diminishing water quality;
 - b. time spent in transport;
 - c. stocking density;
 - d. toxic substances;
 - e. escape.
- 6.7.4 Aquatic vertebrates shall be stunned before killing. Operators shall ensure that equipment used to stun animals is sufficient to remove sensate ability and/or kill the organism and is maintained and monitored.
- 6.7.5 Animals shall be handled, transported and slaughtered in a way that minimizes stress and suffering, and respects species-specific needs.

7 . PROCESSING AND HANDLING

7.1 *General*

General Principle

Organic processing and handling provides consumers with nutritious, high quality supplies of organic products and organic farmers with a market without compromise to the organic integrity of their products.

Requirements:

7.1.1 Handlers and processors shall not co-mingle organic products with non-organic products and shall ensure traceability in the organic processing and handling chain.

Comment from the committee: we realized that co-mingling and traceability are two different things and so we shall split the requirement into 2.

7.1.2 All organic products shall be clearly identified as such, and stored and transported in a way that prevents contact with conventional product through the entire process.

7.1.3 The handler or processor shall take all necessary measures to prevent organic products from being contaminated by pollutants and contaminants, including the cleaning, decontamination, or if necessary disinfection of facilities and equipment.

7.1.4 The handler or processor shall take, identify and minimize risks of environmental pollution resulting from their activity.

Comment David Gould: remove “take”: they should not be taking risks! “minimize” is vague – maybe better to say “reduce”?

Response: thanks for noting the typo! We will delete “take”. An operator may not be able to continuously reduce the risk year after year if it is already low. We realize that “minimize” has 2 different meanings but it is quite obvious which one is intended here.

Comment IOAS: New standard: Requires a HACCP approach in all cases which is a significant change from current practice. Will also apply to on farm processing so will unnecessarily increase the record keeping requirements of many farmers.

Response: and yet it is an important expectation that organic processing, like organic farming, minimizes environmental pollution. This is a still very basis requirement to address this.

7.2 *Ingredients*

General Principle

Organic processed products are made from organic ingredients.

Requirements:

7.2.1 All ingredients used in an organic processed product shall be organically produced except for those additives and processing aids that appear in Appendix 4.

Regional or other exception at certification body discretion

In cases where an ingredient of organic origin is unavailable in sufficient quality or quantity (price not being a reason for unavailability), operators may use non-organic raw materials, provided that:

- a. they are not genetically engineered or contain nanomaterials , and
- b. the current lack of availability in that region is officially recognized¹ or prior permission from the certification body is obtained, and
- c. the requirements from 8.1.2 are applied.

Comment Gunnar Rundgren, Grolink AB: it is simply not realistic to say that price is no reason for unavailability. In a country where there is no organic wholesale or industrial input market, processors can often get something by buying it from another country, but price is an obvious obstacle. We can easily speak about costs that are 5 times as high as the same product would cost in a developed market. Delete point c, the standard 8.1.2 clearly applies.

Response: ok, we shall replace the language in the exception box by “In cases where an ingredient of organic origin is commercially unavailable in sufficient quality or quantity, operators may use non-organic raw materials, provided that:...” and delete point c of the exception box.

Comment FiBL and Demeter Switzerland: Nanomaterials can be from natural origin and not be noxious, so specify that only synthetic nanomaterials are prohibited.

Response: see response in section 2 and refer to the definition of nanomaterials in the definition section.

Comment IOAS: Significant change – requires prior permission from CB for use of any and all non organic ingredients unless they happen to be in a country where such a list is generated in some official manner. This will increase the workload of CBs and will adversely impact all current IFOAM accredited certifiers.

Response: yes, that’s right, but that is worth it.

¹ This may be by inclusion on a government or certification body list of permitted non organic agricultural ingredients.

7.2.2 Using organic and non-organic qualities of the same ingredient in a single product is prohibited.

Comment Paddy Doherty: Replace ‘qualities’ with ‘versions’ or something similar – otherwise this is consistent with national organic standards.

Response: ok, we will replace by “forms”: that is the term used in the NOP and EU regs.

7.2.3 Water and salt may be used as ingredients in the production of organic products and are not included in the percentage calculations of organic ingredients.

7.2.4 Minerals (including trace elements), vitamins and similar isolated ingredients shall not be used unless their use is legally required or where severe dietary or nutritional deficiency can be demonstrated.

Comment IOAS: It is not specified whether the “legal requirement” issue is restricted to the country of sale. For example if a product produced in country A has no legal requirement for a specific isolated ingredient but is destined for country B where there is a mandatory inclusion, can all the product processed in country A include the isolated ingredient – or must there be two processes for the product – one with the isolated ingredient for country B and one without for the home country A. Interpretation by the IOAS has been the latter – two processes.

Response: yes, that is the right interpretation and we will clarify this by rephrasing: “Minerals (including trace elements), vitamins and similar isolated ingredients shall not be used unless their use is legally required or where severe dietary or nutritional deficiency can be demonstrated in the market to which the particular batch of product is destined”.

7.2.5 Preparations of micro-organisms and enzymes commonly used in food processing may be used, with the exception of genetically engineered micro-organisms and their products. Processors shall use micro-organisms grown on substrates that consist entirely of organic ingredients and substances on Appendix 4, if available. This includes cultures that are prepared or multiplied in-house.

Comment David Gould: Replace the last 2 sentences by “Cultures that are prepared or multiplied in-house shall consist entirely of organic ingredients and substances on Appendix 4”. The way this was originally worded is weak at best and probably unenforceable for the foreseeable future.

Response: agreed.

Comment IOAS: “if available” implies regional or CB discretion – so why is this not written up in the same way as other exceptions?

Response: see response to David Gould’s comment. “If available will no longer appear”.

7.3 *Processing Methods*

General Principle

Organic food is processed by biological, mechanical and physical methods in a way that maintains the vital quality of each ingredient and the finished product.

Comment from the committee: we shall change to the following: Organic processing and handling provides the consumer with high quality supplies of organic products without compromise to the integrity of the products and protects the environment.

Requirements:

7.3.1 Techniques used to process organic food shall be biological, physical, and mechanical in nature. Any additives, processing aids, or other material that reacts chemically with organic food or modifies it must appear in Appendix 4 and shall be used in accordance with noted restrictions.

Comment IOAS: There was an interpretation by the IFOAM NMC some years ago which permitted the processing of organic non food products provided that they complied with all requirements of the processing standard. Therefore the use of “food” in the above standard is misleading and could be replaced by “product”. If the intention is to restrict the processing standard only to food, then this is a big change from current practice by many accredited CBs who certify a variety of products under IFOAM accreditation such as organic cosmetics.

Response: agreed. We will respect the interpretation and remove reference to food in this section.

7.3.2 Extraction shall only take place with water, ethanol, plant and animal oils, vinegar, carbon dioxide, and nitrogen. These shall be of a quality appropriate for their purpose.

7.3.3 Irradiation is not permitted.

Comment David Gould: Need to be more specific: x-rays? Ultraviolet? gamma/ionizing?

Response: see definition of irradiation.

7.3.4 Filtration equipment shall not contain asbestos, or utilize techniques or substances that may negatively affect the product. Filtration agents and adjuvants are considered processing aids and therefore must appear in Appendix 4.

Comment David Gould: replace “negatively affect” by “react with the ingredients or otherwise carry into”. Saying “negatively affect” is very subjective. For example, I would say filtering out parts of the whole food is generally a negative affect and goes against the Principle in this section.

Response: agreed, but we will replace it by “contaminate”

7.3.5 The following conditions of storage are permitted (for allowed substances in these conditions, see Appendix 4):

- a. controlled atmosphere;
- b. temperature control;
- c. drying;
- d. humidity regulation.

Ethylene gas is permitted for ripening.

Comment FiBL and Demeter Switzerland: the use of ethylene should be country specific limited for relevant foods but not for all foods allowed as this would mislead consumers.

Response: we will delete reference to ethylene here and instead add it to Appendix 4 as a processing / Post-harvesting handling Aid. We shall change the title of Appendix 4 to “List of Approved Additives and Processing / Post-Harvest Handling Aids”. We will also change the title of the “proc. Aid” column to “Processing & Post-Harvest Handling Aid”. We shall add as a limitation for use “degreening of citrus and ripening”.

7.3.6 Intentional manufacture or use of nanomaterials in organic products is prohibited.

Comment Paddy Doherty: change to “...use of intentionally manufactured nanomaterials..” as these things appear in nature or appear unintentionally as a result of mechanical processes as you know. Would need attestations from supply chain to verify – cannot ask for lab tests.

Response: the definition of nanomaterials in the definition section already specifies that we are referring to intentionally manufactured materials, therefore this language is not necessary.

7.3.7 Equipment surfaces and utensils that might come into contact with organic food shall be free of nanomaterials, unless there is verified absence of contamination risk.

Comment David Gould: remove “unless there is verified absence of contamination risk”: this is a redundant phrase.

Response: it is not redundant in the sense that the nanomaterial might come into contact with the food but might be so tightly embedded in the surface that it might not pass on into the food (so that would be allowed, but there would need to be scientific proof of this).

Comment Paddy Doherty: requires operators to verify that their equipment does not contain nanomaterials. Organic operators are used to this with GMOs.

Comment FiBL and Demeter Switzerland: Processing aid E551 particles has nano-size and in use since many years.

7.4 *Pest and Disease Control*

General Principle

Organic food is protected from pests and diseases by the use of good manufacturing practices that include proper cleaning, sanitation and hygiene, without the use of chemical treatment or irradiation.

Comment David Gould: “without the use of chemical pest control treatments or irradiation”.

Response: agreed.

Requirements:

7.4.1 Handlers and processors shall manage pests and shall use the following methods according to these priorities:

- a. preventative methods such as disruption, elimination of habitat and access to facilities;
- b. mechanical, physical and biological methods, including visual detection, sound, ultra-sound, light and UV-light, temperature control, controlled atmosphere and diatomaceous earth.
- c. substances according to the Appendices of this standard;
- d. substances (other than pesticides) used in traps.

Comment IOAS: Clarification of sound, ultra sound, light and UV light, temperature control, controlled atmosphere and diatomaceous earth is welcome and in line with current practice by accredited CBs.

7.4.2 Prohibited pest control practices include, but are not limited to, the following substances and methods:

- a. pesticides not contained in Appendix 3;
- b. fumigation with ethylene oxide, methyl bromide, aluminum phosphide or other substance not contained in Appendix 4;
- c. ionizing radiation.

7.4.3 The direct use or application of a prohibited method or material renders that product no longer organic. The operator shall take necessary precautions to prevent contamination, including the removal of organic product from the storage or processing facility, and measures to decontaminate the equipment or facilities. Application of prohibited substances to equipment or facilities shall not contaminate organic product handled or processed therein. Application of prohibited substances to equipment or facilities shall not compromise the organic integrity of product handled or processed therein and documented.

Comment David Gould: change to “removal of organic products and related packaging materials from the...”. Change to “and shall be documented to attest this”.

Response: agreed.

7.5 *Packaging*

General Principle

Organic product packaging has minimal adverse impacts on the product and on the environment.

Requirements:

7.5.1 Operators shall not use packaging material that may contaminate organic products. This includes reused bags or containers that have been in contact with any substance likely to compromise the organic integrity. Packaging materials, and storage containers, or bins that contain a synthetic fungicide, preservative, fumigant, or nanomaterials are prohibited.

Comment Diana Callear: can't nitrogen be described as a fumigant? I think there needs to be greater clarity.

Response: Nitrogen is allowed under this standard (Appendix 4) and it is not considered a fumigant in the context of 7.5.1.

Comment IOAS: As declaration for use of nano materials is not universally required by labelling laws (not known if it is required anywhere) then an operator or a CB would have no way of finding out whether such materials have been used.

Response: the approach suggested is that operators should ask the manufacturer of the package for a declaration in case there is a risk that nanomaterials are used.

7.5.2 Operators shall demonstrate efforts to minimize packaging and/or choose packaging materials with minimum environmental impact. The total environmental impact of production, use and disposal of packaging must be considered. Polyvinyl chloride (PVC) and other chlorine-based plastics shall be avoided. Aluminum shall be avoided.

Comment David Gould: "avoided" is ambiguous and weak.

Response: We will change it to prohibit the use of PVC, as there are now many alternatives available and many CBs now ban it, although it was not a requirement in the IBS. On Aluminium however we shall keep the "avoided".

Comment IOAS: Packaging is usually done according to customer specifications and therefore the introduction of this as a standard will have an enormous impact on many processors and may well lead to a decline in the availability of organic products. It is a worthy aim – but cannot necessarily be delivered by the processor- and it is unlikely that a processor would be able to demonstrate any action in this regard. Such initiatives and requirements need to be made on the retail, not the processor level. Would adversely affect all IFOAM accredited CBs.

Response: we will make an exception box with the sentence: "Exceptions may be granted where the operator is bound to certain packaging specifications imposed by his buyer(s)".

7.6 *Cleaning, Disinfecting, and Sanitizing of Food Processing Facilities*

General Principle

Organic food is safe, of high quality, and free of substances used to clean, disinfect, and sanitize the food processing facilities.

Requirements:

7.6.1 Operators shall take all necessary precautions to protect organic food against contamination by substances prohibited in organic farming and handling, pests, disease-causing organisms, and foreign substances.

Comment IOAS: Again seems to be restricted to food where organic processing that is IFOAM accredited includes non food products.

Response: we will make it more general.

7.6.2 Only water and substances that appear in Appendix 4, Table 2 may be used as equipment cleansers and equipment disinfectants that may come into direct contact with organic food. Substances other than those appearing on Appendix 4 are only allowed if they are legally required.

Comment IOAS: After 2005 there was an urgent standards revision which removed this standard. Therefore it is not in the current IBS and should be considered as a new addition. As reaction to this previously was very strong and the request for revision was upheld by IFOAM, there is likely to be an adverse reaction to this once more.

Response: agree, we will revert back to the IBS urgent revision language of August 2007, which was: “Water and substances that appear in Appendix 4, Table 2, as processing aids may be used after harvest as equipment cleansers and equipment disinfectants that may come into direct contact with food.” It was simply a mistake that this language was not taken up in the IBS version that is posted on the website: it should have been.

7.6.3 Operations that use cleaners, sanitizers, and disinfectants on food contact surfaces shall use them in a way that does not contaminate the food.

7.6.4 The operator shall perform an intervening event between the use of any cleaner, sanitizer, or disinfectant and the contact of organic food with that surface sufficient to prevent residual contamination of that organic food.

Comment David Gould: Suggest combining with 7.6.3.

Response: agreed.

Comment IOAS: Again the reference to “food” would seem inappropriate. The requirement to perform an intervening act does not make sense with regard to terminal sanitisers as their whole point is that there is no intervening act. Is it intended to ban all use of terminal sanitisers?

Response: the intervening event may simply be to wait a few minutes for evaporation of the product.

Comment IOAS: Does this mean that textile processing now only needs to comply with the general processing requirements? Or that textile processing is no longer a scope category of IFOAM accreditation?

If it is the latter, then this will have an impact on IFOAM accredited CBs who have textile processing in their scope as it will have to be removed and their operators no longer in their IFOAM programme. If it is the former, then it necessary to remove all references to “food” in the processing chapter.

Response: it is the later. Textile processing will no longer be in the scope of the IFOAM Accreditation program, until IFOAM has worked further on this area and decided how to handle it.

8 . LABELING

Comment Afrisco: What about “in-conversion” labeling?

Response: that was actually the question we raised below to the membership. Sorry that the question was not clear enough and sometimes misunderstood.

Comment IOAS: 1) There is now no requirement in the standards that an operator must comply with the standards before labelling a product as organic. This removes a useful reference for both certification bodies and accreditors alike. Please reinstate.

2) Similarly there is now no reference to the differentiation between conversion and organic logos. If the logos are very similar (and in our experience they often are) then this is misleading as those buying the product may be under the impression that they are buying an organic product when in fact they are not. This is regulated in the organic regulations the IOAS is most familiar with – why has this now been removed from IFOAM standards?

3) Omission of standard prohibiting use of GE free on organic labels. It is clear that there is widespread contamination in some parts of the world by genetically modified materials. To allow a GE claim on an organic label when in fact the product has not been analysed as being GE free will lay organic certification open to widespread criticism should an organically certified product be found to contain GE material (such findings have already happened and will continue to happen). Please reinstate this standard.

Response: 1) We shall add back the requirement that “products produced in accordance with this standard may be labeled as organic”. However we do not want to impose that products produced according to other organic standards should not be labeled as organic. 2) because this standard no longer includes “in conversion” labeling (see responses below). 3), ok, we will put back “Organic products shall not be labeled as GMO-free in the context of these standards. Any reference to genetic engineering on product labels shall be limited to the production and processing methods themselves having not used GMOs.”

8.1 *General*

General Principle

Organic products are clearly and accurately labeled as organic.

Question/note from the committee: Would the membership like to see standards for in-conversion products and if yes for which categories of products (animal feed, food for human consumption, etc)?

Comment Diana Callear, Afrisco Certified Organic: The standards should be the same as for full organic for all products.

Comment Mike Smith, AsureQuality Limited: no comment

Comment Paddy Doherty: no.

Comment Gunnar Rundgren, Grolink AB: Also typically something that is very different in different parts of the world, depending on the development of the sector. Also note that it is only with a longer conversion period that this really is a relevant issue.

Comment Wang Yungang, OFDC: yes, for food.

Comment Akiko Nicholls, Australia Certified Organic: Yes, for human consumption. It's great encouragement for operators to have some sort of status during the transition period.

Comment David Gould: Not necessarily. Only if there is compelling rationale that this will really help more conversion occur. Otherwise it might not be worth the effort involved.

Comment FiBL and Demeter Switzerland: We do not see detailed standards for conversion products for the time being, as long as the conversion periods are clear. There might be some flexibility rules in case of non-availability as the EU Regulations foresee.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): Standards for farms that are converting to organic – transition standards – would be good to encourage conversions – for human food, and livestock feed.

Comment Christian Pein, Gäa e.V.: Not necessarily.

Comment NASAA: Standards for conversion products are the same as for organic products – the length of time of compliance is the issue – any conversion labeling should only occur after compliance with the Standard for 12 months. The importing country also mandates this ie whether conversion is accepted or only organic.

Comment ICS: No.

Response: ok, we do not see a widespread need for in-conversion labeling standards, and also we have shortened back the conversion periods, so that question is now less relevant.

Requirements

- 8.1.1** Labels must identify the following:
- a. the person or company legally responsible for the product
 - b. the body that assures conformity to the applicable organic standard.
- 8.1.2** Processed products shall be labeled according to the following minimum requirements:
- a. Where 95 to 100% of the ingredients (by weight) are organic, the product may be labeled as “organic”.
 - b. Where less than 95% but not less than 70% of the ingredients (by weight) are organic, these product cannot be labeled as “organic”, but phrases such as “made with organic ingredients” can be used, provided the proportion of organic ingredients is clearly stated.
 - c. Where less than 70% of the ingredients (by weight) are organic, the product cannot be labeled as “organic”, nor bear phrases such as “made with organic ingredients” on the package front, nor bear any certification body seal, national logo, or other identifying mark which represents organic certification of a product or product ingredients, but individual ingredients may be called “organic” in the ingredients list.

Notes on calculating percentages:

Water and salt are not included in the percentage calculations of organic ingredients.

Comment David Gould: Please clarify if water added to reconstitute a concentrate or dried ingredient is counted.

Response: We only regard these calculations as a percentage of agricultural ingredients so water would be excluded. We realize that this raises the question of whether this can be used as a leeway by processors to increase the content of conventional ingredients. The committee believes that it is not a major problem currently (perhaps some tendency is there in soups but it is really limited to very few products) and that it would be very complicated to regulate it further (such as based on natural moisture content).

- 8.1.3** All ingredients of a multi-ingredient product shall be listed on the product label in order of their weight percentage. It shall be apparent which ingredients are of organic certified origin and which are not. All additives shall be listed with their full name. If herbs and/or spices constitute less than 2% of the total weight of the product, they may be listed as “spices” or “herbs” without stating the percentage.

9. SOCIAL JUSTICE

Question/note from the committee: Some requirements have been added to the Social Justice section, with a view to strengthen the fairness aspect of organic. The committee asks the membership whether they would like the committee to develop an ethical trade chapter to this standard at a later stage (after approval of the first version).

Comment Diana Callear, Afrisco Certified Organic: No.

Comment Mike Smith,ASUREQuality Limited: no comment.

Comment Paddy Doherty: What are the goals of the organic sector?

Comment Gunnar Rundgren, GroLink AB: No.

Comment Wang Yungang, OFDC: the existing social justice requirements is enough.

Comment Angela Escosteguy, Brazil: Yes, it is very important to develop an ethical trade chapter.

Comment David Gould: I think it would be better to partner with another organization, rather than reinvent this wheel too much. How about IFOAM showing its leadership in the world of voluntary social and environmental standards and exploring with FLO and/or SAI about how to create some synergy?

Comment FiBL and Demeter Switzerland: We think that in first instance a Code of Conduct should be developed on a voluntary basis based on the experiences of organisations involved in such approaches (e.g. like Naturland, Bio Suisse, Demeter). Furthering social conditions in OA has historically been a central aspect of the organic movement. The SC should develop a chapter on ethical trade and social standards in the supply chain once information is gathered from relevant initiatives.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): The committee should develop an ethical trade chapter! In the meantime, in Section 9. Social Justice refers only to employees and workers. What about farmers? In addition to freedom of association and the right to organize for farmers, this section should include: "Contracts are fairly negotiated among the parties involved. (This refers to contracts between farmers and buyers, farmers and farm workers, and between manufacturers, processors or handlers and their employees.)

Contracts include a grievance or conflict resolution procedure that assures all parties against retaliation and provides a clear process for resolving differences, including a method for appeals.

Prices paid to farmers cover the farm's costs of production, plus money to sustain the farm and farm family, and to invest in the future of the farm.

Farmers, buyers and processors pay living wages to farm workers and other employees, and take into account the principle of equal pay for equal work by women and men. (Each region will have to calculate living wages, but at a minimum wages must pay for shelter, food, transportation, health care, education and savings.)

Organic farms and handlers support indigenous people’s rights to land for cultivation, to freely exchange seed and to retain rights to their germplasm in conformation with the Convention on Biological Diversity.”

Comment NASAA: IFOAM should not develop ethical trade standards but work with those who already do. There needs to be clear stipulation of the use of ‘organic’ claims for cosmetic and personal care products – I am not sure how this would fit in with other products but I suspect the food industry has similar issues with companies claiming to be ‘organic’ but in fact only contain very small amounts of organic ingredients. It is particularly bad in the personal care industry, where they are not required to state % inputs of organic content at this point in time.

Comment ICS: Yes.

Response: Based on the comments received, we do not see an urgent need to engage the committee in the development of an ethical trade chapter in this standard. However, we shall welcome interested members to organize themselves and develop such chapter and submit it to the committee for review and sharing with the membership.

General Principle

Social justice and social rights are an integral part of organic agriculture and processing.

Recommendation:

Operators shall positively and actively encourage the collective organization of their employees or contracted smallholders.

Comment David Gould: replace “positively and actively encourage the” by “openly acknowledge the right to”.

Response: this suggestion would be more appropriate for a firm requirement, rather than a recommendation, and it would be somewhat redundant with 9.4.

Requirements:

9.1. Operators shall have and enforce a policy on social justice. This policy shall comply with the minimum national requirements and with all ILO conventions relating to labor welfare and the UN Charter of Rights for Children. This policy shall ensure that all permanent employees and their families shall have access to potable water, food, housing, education, transportation and health services.

Regional or other exception at certification body discretion

Operators who hire fewer than ten (10) persons for labor and those who operate under a state system that enforces social laws are not required to have such a policy.

Comment David Gould: about the last sentence in the requirement: this might not even be possible in some developed countries such as the USA. If you mean employees and their families who are housed by the company, then that is easier to meet.

Comment Gunnar Rundgren, Grolink AB: add “if these are available” at the end of 9.1.

Comment IOAS: The exception has always been interpreted to mean that those exempt are either operations where less than 10 persons are employed or operations in countries where there is a state system enforcing social laws.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): rephrase the requirement as “In all countries, but especially where social legislation is absent or not enforced, organic operations shall have and enforce a policy on social justice that is at least compliant with national requirements and the Conventions of the International Labor Organization relating to labor, and freedom of association, the Universal Declaration of Human Rights the UN Charter of Rights for Children. This policy shall ensure that all employees, both permanent and seasonal, and their families shall have access to potable water, food, housing, education, transportation and health services.”. The exception in the box is a loophole that would exempt most organic farms from these standards. There is no justification for not requiring social standards on all organic farms, regardless of size. If the US is any example, the government standards that do exist are laxly enforced. Farm workers are not included in the National Labor Relations Act that offers a little protection for freedom of association and union organizing. The US only recognizes 2 or 3 of the ILO conventions.

Response: we shall change the requirement to end after the word “housing” and instead write a recommendation “Permanent employees and their families shall have access to education, transportation and health services”.

9.2. In cases where production is based on violation of human rights and clear cases of social injustice, including indigenous land rights, that product cannot be declared as organic.

Comment Gunnar Rundgren, Grolink AB: “including recent violations of indigenous land rights”.

Response: agreed.

Comment FiBL and Demeter Switzerland: Very difficult to implement. Nevertheless sit is positive to mention this issue in the Standard

9.3 Operators shall not use forced or involuntary labor.

9.4 Employees and contractors of organic operations shall have the freedom to associate, to organize and to bargain collectively.

9.5 Operators shall provide their employees and contractors equal opportunity and treatment, and shall not act in a discriminatory way.

9.6 Operators shall not hire child labor.

Regional or other exception at certification body discretion

Children are allowed to experience work on their family's farm or a neighboring farm provided that:

- a. such work is not dangerous or hazardous to their health and safety;*
- b. it does not jeopardize the children's educational, moral, social, and physical development;*
- c. children are supervised by adults or have authorization from a legal guardian.*

Comment IOAS: This standard has always been problematic to implement – and the exception is very tight in that it is restricted to work on a family farm or a *neighbouring* farm. Would it not make better sense to take out the restriction for family or neighbouring farm? Also there is no clear definition as to when a “child” becomes an “adult”. No one wants to see children forced to work – but in many parts of the world this is the reality and necessary for a family’s economic survival or to pay for the child’s schooling. The ILO conventions are many and complicated and the reality is that this is generally ignored by CBs who just state that their country abides by the legal and social laws of the country and makes it impossible for an accreditation check. Could the relevant conventions at the very least be referenced in the IFOAM standard or better still that the standard itself specifies clearly what is and is not permitted?

Response: this is a complicated discussion. We put this comment on the workplan of the committee in the future.

9.7 Operators shall provide written terms and conditions of employment to both permanent and temporary employees. The terms and conditions must specify at least: wages and method of payment, location and type of work, hours of work and overtime, holiday pay, sick pay or sickness benefit and other benefits such as maternity and paternity leave.

Regional or other exception at certification body discretion

In cases where:

- the operator is unable to write, or*
 - workers are hired for periods of less than 3 days, or*
 - emergency labor is needed to address unpredictable problems*
- oral mutual agreements on the terms and conditions of employment are sufficient.*

Comment David Gould: “wages, frequency, and method of payment...”

Response: agreed.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): add “paternity leave, and a

process for conflict resolution. Employees will not be terminated without due process and just cause.”

Response: conflict resolution processes are not normally mentioned in employment contracts. The last sentence is hardly inspectable.

Comment IOAS: this is a completely new and very arduous requirement – both for the obligation of the operator and for the verification of the CB.

9.8 Workers must have adequate protection from noise, dust, light and exposure to chemicals in all production and processing operations.

Comment Gunnar Rundgren, Grolink AB: “sunlight”?

Response: agreed.

Comment François Le Lagadec, InterBio Bretagne: add the requirement (former IBS recommendation): “Operators should respect the rights of indigenous peoples, and should not use or exploit land whose inhabitants or farmers have been or are being impoverished, dispossessed, colonized, expelled, exiled or killed, or which is currently in dispute regarding legal or customary local rights to its use or ownership”.

Response: we shall bring it back as a recommendation. The corresponding requirement is 9.2.

Comment IOAS: New standard which will be difficult for a CB to verify.

SECTION C – APPENDICES

APPENDIX 1: CRITERIA FOR THE EVALUATION OF INPUTS, ADDITIVES AND PROCESSING AIDS FOR ORGANIC PRODUCTION AND PROCESSING

Comment Afrisco: this section is GREAT!

General Principles

Organic production and processing systems are based on the use of natural, biological, renewable, and regenerative resources. Organic agriculture maintains soil fertility primarily through the recycling of organic matter. Nutrient availability is primarily dependent on the activity of soil organisms. Pests, diseases, and weeds are managed primarily through cultural practices. Organic livestock are nourished primarily through organically produced feed and forage, and are kept in living conditions that allow for natural behavior and avoidance of stress. Organic foods and other products are made from organically produced ingredients that are processed primarily by biological, mechanical, and physical means.

Input Lists

The following Appendices contain lists of the inputs, food additives, processing aids, and other substances that are allowed for use in organic production, handling, and processing under this standard. These lists will be amended based on a review by the IFOAM Standard Committee, taking into account the below criteria for evaluation of inputs. The process for members or other stakeholders to request adding, deleting or otherwise changing the status of an input is located in IFOAM Policy 20 on the revision of the IFOAM Norms, which is accessible on the IFOAM website, www.ifoam.org, or can be ordered from the IFOAM Head Office (ogs@ifoam.org).

Production Input Criteria

Inputs used in organic production are consistent with the principles of organic farming outlined in the relevant chapters of the IFOAM Standard and are evaluated against criteria based upon the Precautionary Principle:

‘When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof.’
‘The process of applying the Precautionary Principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action.’

The criteria used to evaluate organic production inputs are based on the following principles:

Necessity and alternatives: Any input used is necessary for sustainable production, is essential to maintain the quantity and quality of the product, and is the best available technology.

Source and manufacturing process: Organic production is based on the use of natural, biological, and renewable resources.

Environment: Organic production and processing is sustainable for the environment.
Human health: Organic techniques promote human health and food safety. Quality: Organic methods improve or maintain product quality.

Social, Economic, and Ethical: Inputs used in organic production meet consumer perceptions and expectations without resistance or opposition. Organic production is socially just and economically sustainable, and organic methods respect cultural diversity and protect animal welfare.

Dossiers for a given substance must address these criteria based on the data requirements and decision rules stated in the criteria below, and meet the criteria to be added to the Appendices.

Comment Afrisco: A general comment: The emphasis on sustainability is obvious and appreciated. However there are many different definitions of sustainability which makes it a very subjective topic. Therefore I suggest that IFOAM adopt a definition, which does not have to be unique to IFOAM, but may well be that of an internationally recognized organization, thereby strengthening our use thereof. To this end I suggest the adoption of the FAO's FESLM definition. FESLM = Framework for the Evaluation of Sustainable Land Management. See <http://www.fao.org/docrep/t1079e/t1079e00.HTM>. Interestingly the points defining the criteria in this sub-section are very close to the FESLM definition.

Response: we will save this comment for the future when the committee will work on revising these criteria.

A) Crop and Livestock Criteria

The following criteria are applied to inputs that are used to evaluate dossiers submitted for crop production. The current IFOAM Standard does not have a separate appendix for livestock inputs. Development of a procedure and application of the criteria to inputs used in livestock production is a work in progress. See chapter 5 for livestock standards and inputs that may be used in organic livestock production.

1. Necessity and Alternatives

All dossiers shall document the necessity of the substance, its essential nature in organic production systems, and the availability of alternative methods, practices, and inputs.

- 1.1 The input is necessary to produce crops or livestock in sufficient quantity and of suitable quality; to cycle nutrients; to enhance biological activity; to provide a balanced animal diet; to protect crops and livestock from pests, parasites, and diseases; to regulate growth; and to maintain and improve soil quality.
- 1.2 A given substance shall be evaluated with reference to other available inputs or practices that may be used as alternatives to the substance.
- 1.3 Every input shall be evaluated in the context in which the product will be used (e.g. crop, volume, frequency of application, specific purpose).

2. Source and Manufacturing Process

All dossiers shall document sources and manufacturing processes.

- 2.1 Biological substances require a description of the source organism(s), a verifiable statement that they are not genetically engineered as defined by IFOAM, and the processes required to breed, culture, produce, multiply, extract, or otherwise prepare the substance for use. Naturally occurring plants, animals,

- fungi, bacteria and other organisms are generally allowed. Substances that undergo physical transformations, such as by mechanical processing, or biological methods, like composting, fermentation, and enzymatic digestion are also generally allowed. Limitations and prohibitions may be set based on consideration of the other criteria. Substances that are modified by chemical reaction are considered synthetic and therefore subject to protocol 2.3 below.
- 2.2 Natural non-renewable resources—such as mined minerals—require a description of the deposit or occurrence in nature. Non-renewable resources are generally restricted or limited in their use. They may be used as a supplement to renewable biological resources, provided they are extracted by physical and mechanical means, and are not rendered synthetic by chemical reaction. Inputs with high levels of natural environmental contaminants, such as heavy metals, radioactive isotopes, and salinity, may be prohibited or further restricted.
 - 2.3 Synthetic substances from non-renewable resources are generally prohibited. Synthetic, nature-identical products that are not available in sufficient quantities and qualities in their natural form may be allowed, provided that all other criteria are satisfied.
 - 2.4 Inputs that are extracted, recovered, or manufactured by means that are environmentally destructive may be restricted or prohibited.

3. Environment

All dossiers shall document the substance's environmental impact.

- 3.1 The environmental impact of a substance includes, but is not limited to, the following parameters: Acute toxicity, persistence, degradability, areas of concentration; biological, chemical, and physical interactions with the environment, including known synergistic effects with other inputs used in organic production.
- 3.2 Effect of substance on the agro-ecosystem, including soil health; the effects of the substance on soil organisms; soil fertility and structure; crops and livestock.
- 3.3 Substances with high salt indexes, measured toxicity to non-target organisms, and persistent adverse effects may be prohibited or restricted in their use.
- 3.4 Inputs used for crop production shall be considered for their impact on livestock and wildlife.

4. Human Health

All dossiers shall document the impacts of the substance on human health.

- 4.1 Documentation about human health includes, but is not limited to: acute and chronic toxicity, half-lives, degradants, and metabolites. Substances reported to have adverse effects may be prohibited or restricted in their use to reduce potential risks to human health.
- 4.2 Dossiers shall document any human who might be exposed by all possible pathways, at every stage: workers and farmers who extract, manufacture, apply, or otherwise use the substance; neighbors who may be exposed through its release into the environment; and consumers exposed by ingestion of food-borne residues.

5. Quality

All dossiers shall document the substance's effect on product quality. Quality includes, but is not limited to, nutrition, flavor, taste, storage, and appearance of the raw product.

6. Social, Economic, and Ethical Considerations

All dossiers shall document the substance's social, economic, and cultural implications.

- 6.1 Social and economic implications include, but are not limited to, the impact of the substance on the communities where they are made and used, whether the use of the substance favors any economic structure and scale, and the historical use of the substance in traditional foods.
- 6.2 Consumer perceptions of the compatibility of inputs shall be taken into account. Inputs should not meet resistance or opposition of consumers of organic products. An input might be reasonably considered by consumers to be incompatible with organic production in situations where there is scientific uncertainty about the impact of the substance on the environment or human health. Inputs should respect the general opinion of consumers about what is natural and organic, e.g. genetic engineering is neither natural nor organic.
- 6.3 Inputs used for animal feed and livestock production shall be evaluated for their impact on animal health, welfare, and behavior. Medications must either alleviate or prevent animal suffering. Animal inputs that cause suffering or have a negative influence on the natural behavior or physical functioning of animals kept at the farm may be prohibited or restricted.

B) Processing and Handling Criteria

Introduction

These criteria apply to the evaluation of food additives and food processing aids. Substances used for technical, sensory, and dietary purposes are subject to these criteria. The criteria may also apply to substances in contact with food. For food processing, an input, non-organic ingredient, additive, or processing aid shall be essential to maintain or improve human health, environmental safety, animal welfare, product quality, production efficiency, consumer acceptance, ecological protection, biodiversity, or landscape. Carriers and preservatives used in the preparation of additives and processing aids must also be taken into consideration. The following aspects and criteria should be used to evaluate additives and processing aids in organic food products. All of the criteria below shall be fully and positively documented in a dossier and review for an input to be allowed in organic processing.

1. Necessity and Alternatives

All dossiers shall document the necessity of the additive, processing aid, or carrier, its essential nature in organic processing and for the proposed application, and the availability of alternative methods, practices, and inputs.

Each substance shall be evaluated with respect to its specific uses and applications, and shall be added when it is demonstrated to be absolutely essential and necessary for the production of a specific food that is consistent with organic principles stated in the IFOAM Standard.

- 1.1. All dossiers shall take into consideration the technical feasibility of the following alternatives:
 - a) Whole foods that are organically produced according to the standard.
 - b) Foods that are organically produced and processed according to the standard.

- c) Purified products of raw materials of non-agricultural origin, e.g. salt.
- d) Purified products of raw materials of an agricultural origin that have not been organically produced and processed according to the standard but appear on Appendix 4.

- 1.2 If an ingredient is required to manufacture a processed food product to independently established minimum technical specifications recognized by consumers, and no organic substitute is available, then a non-organic ingredient can be deemed essential.

Comment David Gould: replace “can be” by “may be”.

Response: agreed.

- 1.3 A given additive, processing aid, or carrier shall be evaluated with reference to other available ingredients or techniques that may be used as alternatives to the substance.
- 1.4 A substance is considered essential if a processed food product requires that substance in order to meet established standards of identity, governmental regulations, or widely accepted consumer expectations.

Comment David Gould: about “widely accepted consumer expectations”: Just because a conventional product exists does not necessarily mean there has to be an organic analog of it! Please attend to this concept here.

Response: it is a good point, but that requires extensive discussion. We will save this comment for the future when the committee will work on revising these criteria.

2. Source and Manufacturing Process

All dossiers shall document the substance’s sources and manufacturing processes.

- 2.1 Additives and processing aids from biological sources, such as fermentation cultures, enzymes, flavors, and gums must be derived from naturally occurring organisms by the use of biological, mechanical, and physical methods. Non-organic forms are allowed in organic products only if there are no organic sources.
- 2.2 Natural non-renewable resources — such as salt and mined minerals — must be obtained by physical and mechanical means, and are not rendered synthetic by chemical reaction. Dossiers must document and meet Food Chemical Codex specifications for natural contaminants, such as heavy metals, radioactive isotopes, and salinity, and may be prohibited or restricted based on unacceptable levels of contamination.
- 2.3 Synthetic nature-identical products that are not available in sufficient quantities and qualities in their natural form may be allowed provided all other criteria are satisfied.
- 2.4 Synthetic substances from non-renewable resources are generally prohibited as additives and processing aids.

3. Environment

All dossiers shall document the substance’s environmental impact.

Documentation for environmental impact: The release of any harmful waste stream or by-products from both manufacturing and use in processing. Food additives and processing aids that result in toxic by-products or polluting waste may be restricted or

prohibited. This includes persistence, degradation, and areas of concentration.

4. Human Health

All dossiers shall document the impacts of the substance on human health.

- 4.1 Documentation about human health includes, but is not limited to: acute and chronic toxicity, allergenicity, half-lives, degradants, and metabolites. Substances reported to have adverse effects may be prohibited or restricted in their use to reduce potential risks to human health.
- 4.2 Dossiers shall document any human who might be exposed by all possible pathways: workers and farmers who manufacture, apply, or otherwise use the substance; neighbors who may be exposed through release into the environment; and consumers exposed by ingestion of food-borne residues.
- 4.3 IFOAM will consider only processing aids and additives evaluated by the Joint FAO/ WHO Expert Committee on Food Additives (JECFA) of the Codex Alimentarius.
 - a) A food additive shall have an Acceptable Daily Intake (ADI) level that is either 'not specified' or 'not limited' to qualify for use without limitation.
 - b) A food additive with any other status shall either be prohibited or have specific use restrictions to limit dietary exposure.
 - c) Evaluation of food additives shall also take into account known allergenicity and immunological responses.
- 4.4 Information about the practical daily intake of the substance by several groups of human should be taken into account. It should be demonstrated that no group has a normal intake, which is higher than the accepted ADI.

5. Quality (in processed products)

- 5.1 All dossiers shall document the substance's effect on overall product quality, including, but not limited to, nutrition, flavor, taste, storage, and appearance.
- 5.2 Additives and processing aids shall not detract from the nutritional quality of the product.
- 5.3 A substance shall not be used solely or primarily as a preservative, to create, recreate or improve characteristics such as flavors, colors, or textures, or to restore or improve nutritive value lost during processing, except where the replacement of nutrients is required by law.

Comment David Gould: add after "law": "Flavors shall not be used as a replacement for agricultural ingredients."

Response: We save this comment for a future revision of this Appendix. See also response to the comment in Appendix 4.

- 5.4 Non-organic ingredients, additives, or processing aids used to process organic products shall not compromise the authenticity or overall quality of the product or deceive the consumer of the product's value.
- 5.5 Each additive shall be evaluated with respect to its specific uses and applications without preference for any specific techniques or equipment, and shall be added to the list only when it is demonstrated to be absolutely essential and necessary for the formulation and production of a specific food that is consistent with organic principles stated in the IFOAM Standard.

6. Social, Economic, and Ethical Considerations

- 6.1 All dossiers shall document the substance's social, economic, and cultural, implications.
- 6.2 Social, economic, implications include, but are not limited to, adverse impacts on communities caused by the manufacture and use of the substance, whether certain economic structures or scales are favored by the use of the processing aid; and the historical use of the additive or processing aid in traditional foods.
- 6.3 Consumer perceptions of the compatibility of additives and processing aids shall be taken into account. Any additives and processing aids shall respect consumer preferences and be accepted by organic consumers. An input might be reasonably considered by consumers to be incompatible with organic production in situations where there is scientific uncertainty about the impact of the substance on the environment or human health. Inputs should respect the general opinion of consumers about what is natural and organic, e.g. genetic engineering is neither natural nor organic.

C) Evaluation Criteria for Materials used in Organic Fiber Processing

In addition to the above applicable criteria, the following additional considerations apply to substances used to process and handle fiber:

Substances may be allowed in organic textile processing only if they are biodegradable, generally recognized as safe and hypoallergenic.

Substances shall be prohibited in organic textile processing if they are carcinogenic, mutagenic, teratogenic, toxic, or produced by genetically modified organisms or ionizing radiation.

Comment from the committee: we will delete these criteria since this standard does no longer have a section on textile processing.

APPENDIX 2: FERTILIZERS AND SOIL CONDITIONERS

Comment Gunnar Rundgren, Grolink AB: It is hard to understand why IFOAM would go back to a system it tried for some years and which totally failed. The main problem with the appendices is that they are changed from being indicative to prescriptive. This has major implications and will tie IFOAM into a service of expanding and maintaining these lists on request of various interest groups. IFOAM has not the capacity for it and someone has to pay for it. To make approval globally a precondition for national use is turning good practices upside down. New methods and substances should be allowed to develop from local approval and use into global use. The other way you totally stifle innovation and development. Positive list are possibly working on the national level, but they are definitively not working well in the global level.

Response: and yet many standards that have positive lists are applied globally: e.g. NOP, EU reg, Soil Association, Naturland. This standard at least calls for input from all global stakeholders to shape the list.

Question/note from the committee: The committee has kept Guano with no restriction in the list of allowed inputs, as was in the IBS. However, extraction is considered by some organizations as unsustainable on a large scale because of habitat damage and limited reserves. Some private standards prohibit it. Some others have restrictions such as recognized need and approval by the CB. The committee would like to ask the membership whether they would like it to be removed from the list or further restricted, and if yes, to provide the related evidence/arguments, relevant to the global level.

Comment Diana Callear, Afrisco Certified Organic: No experience of this.

Comment Mike Smith, AsureQuality Limited: no comment

Comment Gunnar Rundgren, Grolink AB: well, I think guano is fine to use, if extracted with due consideration of the birds or bats that produce it and used locally. I don't think global trade in guano makes any sense - but I don't think IFOAM should try to regulate it.

Comment Wang Yungang, OFDC: concerns about the habitat damage is reasonable.

Comment David Gould: The criteria in Appendix 1 should be applied at the source level for guano. This would mean evaluating and approving different sources, but I think that could be possible, especially if it is only allowed with this type of restriction.

Comment FiBL and Demeter Switzerland: 1. There should be first some criteria first elaborated under which circumstances Guano could be used. 2. No removal from the list, rather limit the use to “sustainably extracted Guano” .

Comment Christian Pein, Gäa e.V.: We do not dare to judge for CBs and farmers outside our reach. In any case we would still prohibit the use of Guano from our perspective even if there would be a compromise within the IBS.

Comment NASAA: Should be restricted to demonstrated needs.

Comment ICS: No.

Response: ideally, organic farmers should use only “sustainably extracted Guano”, however we realize that it is not feasible for those buying the guano to find out if it has been sustainably extracted, therefore we leave it with no restriction, in the absence of a better solution.

Question/note from the committee: The committee has kept “Biodegradable processing by-products, plant or animal origin, e.g. by-products of food, feed, oilseed, brewery, distillery or textile processing” with no restriction in the list of allowed input, as was in the IBS. The committee is however concerned that these by-products of conventional farming and processing could constitute the main part of the nutrient sources according to this standard and would like to ask the membership whether they think that there should be limits on the use of these and what these limits should be.

Comment Diana Callear, Afrisco Certified Organic: The by-products should total no more than 33% of inputs for plant or livestock production, except in vermiculture and micro-organism production.

Comment Mike Smith, AsureQuality Limited: Either free of significant contaminants or composted before bringing onto organic land and confirmed free of significant contaminants.

Comment Paddy Doherty: These can be nasty. Plant (food) byproducts could contain all kinds of pesticides and fertilizers. You could add a condition that the operator must be able to show the provenance of the byproduct to illustrate that prohibited products were not used in its manufacture or extraction.

Comment Gunnar Rundgren, GroLink AB: Not possible to regulate in a global standard.

Comment Wang Yungang, OFDC: no need to set limits. Organic farming should promote the recycling of nutrients.

Comment David Gould: Materials coming from GMO sources should at least be composted or passed through some other biological system prior to use on organic farms. Materials suspected of other contaminants (eg heavy metals) should be appropriately checked – I see the Appendix 1 narrative as addressing this, but perhaps it could be more explicit as well. Additional restrictive language could be added to Appendix 2.

Comment FiBL and Demeter Switzerland: the use of biodegradable by-products is an important contribution to the recycling of resources and should not be prohibited. The use should be limited however to by-products that do not impair the agro-ecosystem

(e.g. contaminant residue) or jeopardize the organic integrity of the system (e.g. by-products from GMOs). Add as a limitation “only if not chemically treated”.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): In the US conventional by-products are likely to be gmo - and should not be allowed.

Comment Christian Pein, Gää e.V.: If conventional by-products are brought-in (e.g. biogas slurry) no by-products/ ingredients from industrial farming should be allowed, in case of manure only products of animal origin from extensive farms, no slurry from farms that do not provide litter. Input only permitted if farmer can demonstrate good farming practice through crop rotation and cultivation of legumes on at least 20% of the farmland.

Comment NASAA: It is preferable that conventional farming byproducts are recycled to capture their energy or nutrient value, and that limitation of applicability to organic systems be avoided other than to consider deleterious contaminants or GM provenance. Recourse to organic farming byproducts is not a readily available opportunity in Australian production systems.

Comment ICS: We think that biodegradable processing by products should be allowed, but not as a substitute for green manure, sod/soil building crops, animal manure etc.

Response: we shall add as a condition for use: “Free of significant contaminants, or composted before bringing onto organic land and confirmed free of significant contaminants”. Moreover, we shall strengthen requirement 4.4.2 (see response under section 4.4), and we shall add to “Farmyard manure, slurry and urine” the following condition for use: “Shall not constitute the main source of nitrogen in the absence of complimentary and additional nitrogen generating practices on farm and shall not be from conventional intensive livestock production systems without prior permission from the control body”.

Question/note from the committee: Compared to the IBS, the committee points removed the restriction of corn gluten meal to weed control, so as to allow it as well for other uses such as in traps or as repellent. Any objection?

Comment Diana Callear, Afrisco Certified Organic: no objection.

Comment Mike Smith, AsureQuality Limited: no comment

Comment Paddy Doherty: In this case, and with others, it doesn't hurt to add a note that GMO corn is commonly grown and that operators are responsible to ensure they are not using products derived from genetic engineering.

Comment Gunnar Rundgren, GroLink AB: no.

Comment Wang Yungang, OFDC: no objection.

Comment David Gould: Should not be from GMO sources.

Comment FiBL and Demeter Switzerland: no objection.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): no objection.

Comment Christian Pein, Gäa e.V.: No objection.

Comment NASAA: no objection.

Comment ICS: No

Response: good. We leave it as it is.

SUBSTANCES DESCRIPTION, COMPOSITIONAL REQUIREMENTS	CONDITIONS FOR USE
I. PLANT AND ANIMAL ORIGIN	
Farmyard manure, slurry and urine	
Guano	
Source separated human excrement	<p>Must be monitored for contamination and must not be directly applied on edible parts nor on annual fruit or vegetable crops. Only under the exception listed under 4.4.5.</p> <p>Comment FiBL and Demeter Switzerland: “vegetable crops after planting”.</p> <p>Response: will simply refer to the requirements in 4.4.5.</p>
Vermicastings	
Blood meal, meat meal, bone, bone meal	
Hoof and horn meal, feather meal, fish and shell products, wool, fur, hair, dairy products Comment FiBL and Demeter Switzerland: add “hide” to this list. Response: agreed	
Biodegradable processing by-products, plant or animal origin, e.g. by-products of food, feed, oilseed, brewery, distillery or textile processing	
Crop and vegetable residues, mulch, green manure, straw Comment FiBL and Demeter Switzerland: add to this list “plant fibers e.g. miscantus, coir” Response: We shall rephrase to “crop residues and plant materials, mulch, green manure, straw”.	

Wood, bark, sawdust, wood shavings, wood ash, wood charcoal	<p>Only if un-chemically treated</p> <p>Comment David Gould: “Only if not chemically treated”</p> <p>Comment FiBL and Demeter Switzerland: “only if not chemically treated and after chopping down”.</p> <p>Response: agreed to change to “not chemically treated”.</p> <p>Whether to chop it down or not is not for IFOAM to regulate and is the decision of the farmer, depending on the base materials and his objective. Wood ash and sawdust might not always need to be chopped down.</p>
Seaweed and seaweed products	As far as obtained by: (i) physical processes including dehydration, freezing and grinding; (ii) extraction with water or potassium hydroxide solutions, provided that the minimum amount of solvent necessary is used for extraction; (iii) fermentation.
Peat (prohibited for soil conditioning)	Excluding synthetic additives; permitted only in horticulture (floriculture, nursery plants, potting mixes).
Plant preparations and extracts	
Compost made from ingredients listed in this appendix,	
spent mushroom waste, humus from worms and insects,	
urban composts and household wastes from separated sources which are monitored for contamination	
II. MINERAL ORIGIN	
Calcareous and magnesium amendments:	
<p>Limestone, gypsum, marl, maerl, chalk, sugar beet lime,</p> <p>Comment FiBL and Demeter Switzerland: With the production of maerl, important ecosystems in the sea will be destroyed! Mining is ok.</p> <p>Response: The committee believes that the problem of unsustainable mining/extraction that destroys ecosystems is not limited to maerl only, and that</p>	

finding language that restrict natural materials to those sustainably obtained / extracted has proven very difficult, if not impossible in the context of organic standards. Also, the committee thinks that the economic importance of maerl and its use is not so important and so decided to leave it as it is and have no restriction mentioned for now.	
calcium chloride,	
Magnesium rock, kieserite and Epsom salt (magnesium sulfate)	
Other non-synthetic calcareous and magnesium amendments	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Mineral potassium (e.g. sulfate of potash, muriate of potash, kainite, sylvanite, patenkali) Comment FiBL and Demeter Switzerland It is better for soil fertility to have not excessive sodium on the soil.	Shall be obtained by physical procedures but not enriched by mechanical processes Comment FiBL and Demeter Switzerland: delete this condition. Response: The committee acknowledges that the restriction is difficult to enforce as it is difficult for CBs to obtain information on the processes of extraction of sulphate of potash, but decided to keep it as it is, in the absence of better alternative. However the typo of “mechanical” will be corrected to “chemical”.
Phosphates in non-synthetic form (e.g. rock phosphate, colloidal phosphate, apatite) Comment FiBL and Demeter Switzerland: add “recycled Phosphorus from sewage sludge ashes” as a different line. About the limited P resources, it is necessary to get new technologies for a better P Recycling in Europe and especially in Africa. Response: we would like to see a dossier before adding this.	Cadmium content less than or equal to 90 mg/kg of P ₂ O ₅
Pulverized rock, stone meal Comment FiBL and Demeter Switzerland: add “crushed stone, e.g. pumice, lava”. Response: we will add “crushed stone”.	
Sodium chloride	
Sulfur	
Trace elements, e.g.: boric acid, sodiumborate, calciumborate,	Use restricted to cases where soil/plant nutrient deficiency

borethanolamin, copper oxide, copper sulfate, copper hydroxide, copper silicate, copper carbonate, copper citrate ferric oxide, ferric sulfate, ferrous sulfate, iron citrate, iron sulfate, or iron tartrate manganous oxide, manganese sulfate and manganese carbonate sodiummolybdate, molybdic oxide zinc carbonate, zinc oxide, zinc silicate, and zinc sulfate	is documented by soil or tissue testing or diagnosed by an independent expert. Micronutrients in either chloride or nitrate forms are prohibited; Micronutrients may not be used as a defoliant, herbicide, or desiccant.
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Question/note from the committee: The committee has added restrictions on the use of trace elements and adopted a new approach to list recommended forms in which they should be applied (Appendix 1). The membership is asked to provide input on which forms of cobalt and selenium should be recommended.

Comment Diana Callear, Afrisco Certified Organic: cannot comment.

Comment Mike Smith, AsureQuality Limited: Cobalt – exclude nitrates or chlorides.

Response: that is already covered in the condition for use.

Comment Gunnar Rundgren, GroLink AB: You can't regulate trace elements in a global standard in any detail. The point of the long list is not clear. They are just examples. It means that any form is OK except for what is specifically prohibited. The examples confuse more than clarify.

Comment David Gould: I suggest consulting OMRI on this.

Comment FiBL and Demeter Switzerland: The use of trace-elements should be limited to essential plant nutrients. The use of synthetic chelates should be prohibited.

Comment NASAA: Both these trace elements have critical metabolic importance and are depleted in Australian soils. Appropriate forms for use would be those of highest solubility in water, other than chloride or nitrate salts, e.g. Co-acetate, Co-iodide, or Co-sulphate; selenic acid or selenous acid. It should be noted that these are unlikely to be naturally mined (ref A2.2), but would qualify under A2.3 as synthetically produced conditional on all other criteria being complied with (Inputs Assessment)

Response: we will add Co-acetate, and Co-sulphate; selenic acid and selenous acid to the list of examples.

III. MICROBIOLOGICAL	
Biodegradable processing by-products of microbial origin, e.g. by-products of brewery or distillery processing	
Microbiological preparations based on naturally occurring organisms	
IV. OTHERS	
Biodynamic preparations	
Calcium lignosulfonate	

APPENDIX 3: CROP PROTECTANTS AND GROWTH REGULATORS

Question/note from the committee: As compared to the IBS, the committee removed quicklime and replaced it by hydrated lime, and also added a restriction to limit it to foliar applications only. Any objection to this change?

Comment Diana Callear, Afrisco Certified Organic: no comment.

Comment Mike Smith, AsureQuality Limited: Perhaps also biosecurity response.

Comment Paddy Doherty: no.

Comment Gunnar Rundgren, GroLink AB: Not sure about the limitation to foliar application only. It is used on other ways as well, e.g. put on bark of trees.

Comment Wang Yungang, OFDC: lime is sometimes applied in acid soil of tea garden to neutralise the acidity. Is that application of lime allowed?

Response: this is regulated under Appendix 1 (soil conditioner). Limestone is allowed.

Comment David Gould: no

Comment FiBL and Demeter Switzerland: we think that for some hygienic applications, e.g. in case of some diseases, quick lime should be still allowed.

Response: see response to Gää below.

Comment Elizabeth Henderson for the Northeast Organic Farming Association (NOFA) and the National Organic Coalition (NOC): no objection.

Comment Christian Pein, Gää e.V.: Quick lime is not necessary as a crop protectant/growth regulator but it is used for disinfection in animal houses and permitted according to German private standards.

Response: ok, we will include quick lime in the new appendix for substances allowed for pest control in livestock houses.

Comment NASAA: no objection.

Comment ICS: no.

Response: based on the comments received we shall leave hydrated lime but extend the condition for use to “for application on aerial plant parts only”.

SUBSTANCES DESCRIPTION, COMPOSITIONAL REQUIREMENTS	CONDITIONS FOR USE
I. PLANT AND ANIMAL ORIGIN	
Algal preparations	As far as obtained by: (i)

	physical processes including dehydration, freezing and grinding; (ii) extraction with water or potassium hydroxide solutions, provided that the minimum amount of solvent necessary is used for extraction; (iii) fermentation.
Animal preparations and oils	
Beeswax	
Chitin nematocides (natural origin)	Not processed by acid hydrolysis
Coffee grounds	
Corn gluten meal	
Dairy products (e.g. milk, casein)	
Gelatine	
Lecithin	
Natural acids (e.g. vinegar)	
Neem (<i>Azadirachta indica</i>)	
Plant oils	
Plant preparations	
Plant based repellents	
Propolis	
Pyrethrum (<i>Chrysanthemum cinerariaefolium</i>)	The synergist Piperonyl butoxide is prohibited.
Quassia (<i>Quassia amara</i>)	
Rotenone (<i>Derris elliptica</i> , <i>Lonchocarpus</i> spp. <i>Tephrosia</i> spp.)	Not near waterways. Subject to approval by the CB
Ryania (<i>Ryania speciosa</i>)	
Sabadilla	
II. MINERAL ORIGIN	
Chloride of lime (calcium chloride)	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Copper salts (e.g. sulfate, hydroxide, oxychloride, octanoate)	Max 6 kg Cu/ha per year (on a rolling average basis)
Diatomaceous earth	
Light mineral oils (paraffin)	
Lime sulfur (Calcium polysulfide)	
Potassium bicarbonate	

SUBSTANCES DESCRIPTION, COMPOSITIONAL REQUIREMENTS	CONDITIONS FOR USE
Calcium hydroxide (hydrated lime)	For foliar application only
Silicates (e.g. sodium silicates, quartz)	
Sodium bicarbonate	

Sulfur	
III. MICROORGANISMS	
Fungal preparations (e.g. spinosad)	
Bacterial preparations (e.g. Bacillus thuringiensis)	
Release of parasites, predators and sterilized insects	
Viral preparations (e.g. granulosis virus)	
IV. OTHERS	
Biodynamic preparations	
Carbon dioxide	
Ethyl alcohol	
Homeopathic and Ayurvedic preparations	
Iron phosphates (for use as molluscicide)	
Seasalt and salty water	
Soft soap	
V. TRAPS, BARRIERS, REPELLENTS	
Physical methods (e.g. chromatic traps, mechanical traps)	
Mulches, nets	
Pheromones – in traps and dispensers only	

APPENDIX 4 – TABLE 1: LIST OF APPROVED ADDITIVES² AND PROCESSING AIDS

Substances of certified organic origin must be used if commercially available. If organic sources are not available, natural sources must be used if commercially available. Only if organic and natural sources are not available, synthetic forms of the substances below may be used.

INT'L NUM- BERIN G SYSTE M	PRODUCT	ADDITIV E	PRO C. AID	LIMITATION/NOT E
INS 170	Calcium carbonate	X	X	Not for coloring
INS 184	Tannic acid		X	Filtration aid for wine
INS 220	Sulfur dioxide	X		Only for wine
INS 224	Potassium metabisulphite	X		Only for wine
INS 270	Lactic acid	X	X	
INS 290	Carbon dioxide	X	X	
INS 296	L-malic acid	X	X	
INS 300	Ascorbic acid	X		
INS 306	Tocopherols, mixed natural concentrates	X		
INS 322	Lecithin	X	X	Obtained without bleaches
INS 330	Citric acid	X	X	
INS 331	Sodium citrates	X		
INS 332	Potassium citrates	X		
INS 333	Calcium citrates	X		
INS 334	Tartaric acid	X	X	Only for wine
INS 335	Sodium tartrate	X	X	
INS 336	Potassium tartrate	X	X	
INS 341	Mono calcium phosphate	X		Only for “raising flour”
INS 342	Ammonium phosphate	X		Restricted to 0.3 gm/l in wine
INS 400	Alginic acid	X		
INS 401	Sodium alginate	X		
INS 402	Potassium alginate	X		
INS 406	Agar	X		
INS 407	Carrageenan	X		
INS 410	Locust bean gum	X		
INS 412	Guar gum	X		
INS 413	Tragacanth gum	X		
INS 414	Arabic gum	X		

² Food additives may contain carriers, which shall be evaluated.

INT'L NUM- BERIN G SYSTE M	PRODUCT	ADDITIV E	PRO C. AID	LIMITATION/NOT E
INS 415	Xanthan gum	X		
INS 428	Gelatin		X	
INS 440	Pectin	X		Unmodified
INS 500	Sodium carbonates	X	X	
INS 501	Potassium carbonates	X	X	
INS 503	Ammonium carbonates	X		Only for cereal products, confectionery, cakes and biscuits
INS 504	Magnesium carbonates	X		
INS 508	Potassium chloride	X		
INS 509	Calcium chloride	X	X	
INS 511	Magnesium chloride	X	X	Only for soybean products
INS 513	Sulfuric acid		X	PH adjustment of water during sugar processing Comment from the committee: we will allow also allow it as additive with limitation: for wine and apple cider production.
INS 516	Calcium sulfate	X		For soybean products, confectionery and in bakers' yeast
INS 517	Ammonium sulfate	X		Only for wine, restricted to 0.3 mg/l
INS 524	Sodium hydroxide	X	X	For sugar processing and for the surface treatment of traditional bakery products
INS 526	Calcium hydroxide	X	X	Food additive for maize tortilla flour Processing aid for sugar
INS 551	Silicon dioxide (amorphous)		X	
INS 553	Talc		X	
INS 558	Bentonite		X	Only for fruit and vegetable products

INS 901	Beeswax		X	
INS 903	Carnauba wax		X	

INT'L NUM- BERIN G SYSTE M	PRODUCT	ADDITIV E	PRO C. AID	LIMITATION/NOT E
INS 938	Argon	X		
INS 941	Nitrogen	X	X	
INS 948	Oxygen	X	X	
	Activated carbon		X	
	Casein		X	Only for wine
	Cellulose		X	
	Diatomaceous earth		X	
	Ethanol		X	
	Isinglass		X	Only for wine
	Kaolin		X	
	Perlite		X	
	Preparations of bark		X	Only for sugar

Flavoring Agents

Operators may use:

- organic flavoring extracts (including volatile oils), and, if not available,
- natural flavoring preparations approved by the certification body. Such approval shall include assessment that natural flavors shall meet the following criteria:
 - the sources are plant, animal or mineral
 - the process of production is in accordance with a recognized organic standard
 - be produced by means of solvents such as vegetal oil, water, ethanol, carbon dioxide and mechanical and physical processes.

Comment David Gould: The whole use of flavoring agents as a substitute for organic agricultural ingredients is highly incompatible with principles and goals of the organic movement. Only certain limited flavors should be allowed, eg vanilla, where these have long-standing traditional use and cannot be mistaken for anything else. Putting raspberry flavor in my raspberry yogurt is deceptive to consumers, and although may make more units of product be sold, do not advocate for increased or diversified agricultural production. This has been a major failing of the organic movement in my opinion.

Response: we respect this opinion but it goes beyond most organic standards. We believe that the above language is as far as we can go for now.

Comment IOAS: Indication of the word “flavouring” does not cover use for non food products such as extracts used in essential oil preparation.

Response: perhaps a future area of work if we get such request.

Preparations of Micro-organisms and Enzymes for use in food processing (see 6.2.4.)

Comment Akiko Nicholls, Australia Certified Organic: This reference seems incorrect. Should it be 7.2.5?

Response: correct, we will change it.

These may be used as ingredient or processing aids with approval from the certification body:

- Organic certified micro-organisms
- Preparations of micro-organisms
- Enzymes and enzyme preparations

APPENDIX 4 – TABLE 2: LIST OF EQUIPMENT CLEANSERS AND EQUIPMENT DISINFECTANTS THAT MAY COME INTO DIRECT CONTACT WITH FOOD

Comment David Gould: See my comments below. In general, if it's not on Appendix 4 Table 1 and it doesn't disappear completely on its own (eg ozone, ethanol, etc.) than an intervening event is needed and it shouldn't be on this list.

Response: see below

Comment IOAS: Due to the urgent standards change in 2007, cleaning materials are not currently regulated. Reconstituting this table in the certification standard is a significant change.

Response: agree, since we will revert to the language in the urgent revision, we will delete this appendix.

PRODUCT	LIMITATION/NOTE
Acetic acid	
Alcohol, ethyl (ethanol)	
Alcohol, isopropyl (isopropanol)	
Calcium hydroxide (slaked lime)	
Calcium hypochlorite	An intervening event or action must occur to eliminate risks of contamination
Calcium oxide (quicklime)	
Chloride of lime (calcium oxychloride, calcium chloride, and calcium hydroxide)	
Chlorine dioxide	An intervening event or action must occur to eliminate risks of contamination Comment David Gould: If this is the case then the material shouldn't be on this list. Same for each material so annotated here. Response: see response above.
Citric acid	
Formic acid	
Hydrogen peroxide	
Lactic acid	
Natural essences of plants	
Oxalic acid	
Ozone	

Peracetic acid	
Phosphoric acid	Only for dairy equipment
Plant extracts	
Potassium soap	
Sodium carbonate	
Sodium hydroxide (caustic soda)	
Sodium hypochlorite	An intervening event or action must occur to eliminate risks of contamination
Sodium soap	