Uganda Organic Standard (UOS)

FOR ORGANIC PRODUCTION AND PROCESSING

2006

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Scope of the Uganda Organic Standard (UOS)

Organic agriculture is a system based upon a set of processes resulting in a sustainable production agro-ecosystem, producing safe food with good nutrition value, safeguards animal welfare and promotes socio-economic equity. Organic production therefore is more than a mere production system that includes or excludes certain inputs.

The Uganda Organic Standards (UOS) is a guide to the certification of organic production in Uganda. It also serves as standards for UgoCert certification. The UOS will also be as a tool for others active in organic production sector such as advisers/Extensionists, researchers, policy makers and government institutions involved in the development of organic agriculture.

The UOS takes into account the specific agro-ecological conditions of Uganda and the stage of development of organic production in the country. The UOS is built on the IFOAM Basic Standards and has been developed through a long process involving the stakeholders. The UOS make it possible to follow a product through the whole production chain to the final sell point as an organic product.

Structure of the UOS

General Principles, Recommendations and Standards

The UOS are presented as General Principles, Recommendations, and Standards. General Principles are the intended goals of organic production/sustainable production and processing. Recommendations are practical suggestions for operators to implement on the organic farm, wild fisheries and in organic processing and Standards are the minimum requirements that an operator must meet to be certified against the UOS.

Local standards

The UOS have been developed to meet international requirements for organic products. As organic production is still in an early stage of development in Uganda there are some standards that have been made for only the local market in Uganda and cannot be used for export. These standards are marked as local standards in the text.

Definitions

Definitions are technical terms and are explained in the section on definitions.

Appendices

In appendix 1-4 of the UOS is the list of permitted inputs for fertilisation, soil conditioning and crop protectants,

additives and processing aids to be used in organic food processing as well as Registration and inspection/control issues in Fisheries.

New inputs

For evaluating new inputs to be used in organic farming and food processing, the UOS refers directly to the IFOAM Basic Standards criteria for these types of evaluations. Appendix 3 in the IFOAM Basic Standards, *Criteria to Evaluate Additional Inputs to Organic Agriculture* are used for inputs on the farms, and *Criteria for the Evaluation of Additives and Processing Aids for Organic Food Products is used for food processing.*

The IFOAM Basic Standards can be found on www.ifoam.org

Revision

The UOS is a work in progress and as organic production is developed in Uganda the UOS will have to be revised. This is the first edition of the UOS therefore, there will also be a need for revision as more knowledge and understanding of organic agriculture is developed. In developing this first version of UOS, the Standards Committee has worked with a broad spectrum of stakeholders in an extensive consultative process involving the holding of consultative workshops and also circulation of drafts for written comments and suggestions. Two drafts were circulated before the final version was

produced. Future revisions of the UOS will also involve extensive consultations and the participation of the stakeholders.

Question and comments

Questions and comments about the UOS should be sent to NOGAMU or UgoCert email: admin@nogamu.org.ug or info@ugocert.org respectively. All input in the development of the UOS will be appreciated.

Definitions

Definitions are technical terms and are explained in the section on definitions.

Accreditation
Procedure by which an authoritative body gives a formal recognition that a body or person is competent to carry out specific tasks.

Aquatic ecosystem
The wider environment in which the fish lives, such as the underwater environment, floating plants, plants rooted under water or on the direct borders of the water body. The width of this border depends on the local situation. For example a fishery based on cutting wood on the slopes of a lake may be considered unsustainable because it causes erosion affecting the lake.

Battery Farming System
Farms where by a number of chicken or other animals are left in very small cage or crowded conditions.

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 type).

Breeding
Selection of plants or animals to produce 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.

By-catches
Catches of fish, which are not the target of the fishery. This can be undersized fish of the target fish stock, non-target fish species, or other animals, such as birds, reptiles or mammals

Certification
The procedure by which a third party gives written assurance that a clearly identified process has been methodically assessed, such that adequate confidence is provided that specified products conform to specified requirements.

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

Conventional
Conventional means any material, production or processing practice that is not certified organic or "organic in-conversion" or traditional system.

Conversion period
The time between the start of the organic management and the certification of crop and animal husbandry as organic.

Critical spawning biomass
Minimal biomass of adult fish required securing the minimum stock size for a sound fishery

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 so as to break weed, pest and disease cycles and to maintain or improve soil fertility and organic matter content.

Direct source organism
The specific plant, animal, or microbe that produces a given input or ingredient, or that 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.

Drugs and chemical agents for the treatment of animals
Drug products apply to products that are administered to animals to indicate, prevent, relieve or care for diseases or symptoms caused or used in similar situations.

Environmental impact
A change in the environment positive or negative caused totally or partially by the operator's activities, products or services.

Exemption
Permission granted by the certification body to an operator applying for certification under the UOS to be excluded from the need to comply with normal requirements of the standards. Exemptions shall be granted on the basis of clear criteria, with clear justification and for a limited time period.

Farm unit
The total area of land under control of one farmer or groups of farmers, including all the farming activities or enterprises.

Fish
Fish is used in these standards for both fish and shellfish

Fishery
Fishery refers in these standards to the whole chain of wild catch fish in Uganda: from fishing ground up to the gate of the retail or, if the product is exported, to the national border.

Fishing
The activities of the fishermen, such as going by boat to the fishing ground, setting and lifting nets and transporting fish to landing site. Transport of fish from more than one fishing boat is not considered fishing.

Food additive

An enrichment, supplement or other substance which can be added to a food stuff to affect its keeping quality, consistency, colour, taste, smell or other technical property

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

Genetic engineering
Genetic engineering is a set of technical forms of molecular biology, such as recombinant DNA by which the genetic material of plants, animals, micro organisms, 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 modification include, but are not limited to recombinant DNA, cell fusion, micro and macro injection, encapsulation, gene deletion and doubling. Genetically engineered organisms do not include organisms resulting from techniques such as conjugation and natural hybridization

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

Genetic resources
Genetic resources mean genetic material of actual or potential value.

Ghost fishing
Lost nets which remain in the water and continue to kill fish

Green manure
A crop that is incorporated into the soil for the purpose of soil improvement. 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.

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 (ionising radiation)
High energy from radio-nucleotides, capable of altering a food'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.

Labelling
Any written, printed or graphic representation that is present on the label of a product, accompanies the product, or is displayed near the product.

Operator
An individual or business enterprise, responsible for ensuring that products meet the certification requirements. The holder of the UgoCert certification

Organic
"Organic" refers to the farming system and products described in the Uganda Organic Standards and produced and certified in compliance with the UOS.

Organic product
A product, which has been produced, processed, and/or handled in compliance with these 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 both a certified organic system and a non-organic 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.

Precautionary approach
The precautionary approach is a set of measures that intend to minimize degrading or irreversible effects by human activity on aquatic ecosystems. These measures require that fishery management must evaluate and

consider effects of fishery on fish stocks and the aquatic environment when deciding on fishing.

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, food or its ingredients, to fulfil a certain techno-purpose during treatment or processing and which may result in the non–intentional, but unavoidable presence of residues or derivatives in the final product.

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.

Sustainable fishery
See: fishery

Sustainability of the fish stock
Not limited to healthy fish (appearance of the fish) and health hazards (heavy metals, pesticides etc. in fish or the environment), but also number & size of the target fish stock

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.

Abbreviations

BMU
Beach Management Units

DFO
District Fisheries Officer

EU
European Union

FAT
Fisheries Advisory Team

IFOAM
International Federation of Organic Agriculture Movements

ILO
International Labour Organization

NOGAMU
National Organic Agricultural Movement of Uganda.

UgoCert
Uganda Organic Certification Company Limited

UOS
Uganda Organic Standards

1. General standards

1.1 Ecosystem Management

1.1.1 General principle

Organic farming improves benefits, and sustains the ecosystems quality.

1.1.2 Recommendations

The operators should maintain a significant portion of their farms in order to facilitate biodiversity and nature conservation of their areas

A farm should place appropriate areas under its management in wildlife refuge habitat. These include:

- Ecologically rich fallow land or arable land
- Ecologically diversified (extensive) field margins
- Extensive grassland such as reed land or dry land and meadows
- 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
- Shades in plantations shall be saved
- Farmers shall only use a part of the forest for collection of wood
- Water ways, pools, springs, ditches, floodplains, wetlands, swamps and other water rich areas which are

not used for intensive agriculture or aquaculture production
- Wildlife corridors that provide linkages and connectivity to native habitat
- Areas with ruderal flora.

1.1.3 Standards

1.1.3.1
Operators shall take measures to maintain and improve landscape and enhance biodiversity.

1.1.3.2
Clearing and/or burning of forest reserve, national parks and protected wetlands is prohibited.

1.2 Soil and Water Conservation

1.2.1 General principle

Organic farming methods are to enhance, improve and conserve soil fertility, maintain water quality and use of water responsibly and efficiently.

1.2.2 Recommendations

Operators should minimise loss of topsoil through minimal tillage, contour ploughing, crop selection, and rotation maintenance of soil plant cover and other management practices that conserve soil.

Operators should take measures to prevent erosion, compaction, salination and other form of soil degradation

Operators should use appropriate techniques, for soil and water conservation such as increasing organic matter content of soil, timing of planting and the appropriate design, efficiency and scheduling of irrigation practices.

Operators should apply water and inputs in a way that does not pollute water by run off to surface water leaching into ground water

Operators should plan and design systems that use water resources responsibly and in a manner appropriate to local climate and geography.

1.2.3 Standards

1.2.3.1
Relevant measures shall be taken to prevent erosion by all operators

1.2.3.2
Land clearing and preparation by burning vegetation shall be restricted to the minimum. Burning of crop residues shall be restricted to a minimum.

1.2.3.3
Crop production, processing and handling systems 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

1.2.3.4
Operators shall apply appropriate stocking rates, which do not lead to land degradation or pollution of ground and surface water.

1.2.3.5
Relevant measures shall be taken to prevent or remedy soil and water salinisation.

1.2.3.6
Operators shall not excessively exploit or deplete water resources, and shall, where appropriate, design, measure and monitor irrigation water application.

1.3 Genetic Engineering

1.3.1 General principle

Genetic engineering is not allowed in organic production and processing.

1.3.2 Standards

1.3.2.1
The use of genetically modified organisms or their derivatives is strictly prohibited. This shall include animals, seeds and/or farm inputs such as fertilizers, soil conditioners, vaccines or crop protection materials.

1.3.2.2
Organic processed products shall not use ingredients, additives or processing aids derived from GMOs.

1.3.2.3
All 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 GMO.

1.3.2.4
Contamination of organic products by GMO that results from negligence or circumstances beyond the control of the operator may alter the organic status of the operation and or/product.

1.4 Minor Forest Products, wild harvested products and common/public land Management.

1.4.1 General principle

Organic management sustains and prevents degradation of common resources including areas used for grazing land, open grassland fisheries, forests and forage for bees as well as neighbouring land, air water. Interests of forest communities should be protected.

1.4.2 Recommendations

The operator should provide for maintenance and sustainability of the ecosystem when harvesting or gathering the products. The operator should positively contribute to the maintenance of natural areas.

1.4.3 Standards

1.4.3.1
Wild harvested products shall derive from a stable and sustainable growing environment. The people who harvest, gather or pick shall not take any products 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.

1.4.3.2
Operators shall harvest products from a clearly defined area where substances not allowed in these standards have not been used for the last year.

1.4.3.3
The collection or harvest area shall be at an appropriate distance from conventional farming, pollution and contamination. In case of operators working towards or involved in certified production, the distance shall be specified by the certification body.

1.4.3.4
The operator who manages the harvesting or gathering of common resource products shall be familiar with the defined collecting area.

2. Crop Production

2.1 Choice of Crops and Varieties

2.1.1 General Principle

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

2.1.2 Recommendations

A wide range of crops and varieties should be grown to enhance the sustainability, self-reliance and biodiversity value of organic farms.

Plant cultivars suitable for organic production should be selected to maintain both genetic diversity and biodiversity.

2.1.3 Standards

2.1.3.1
Organic seed and plant materials of appropriate varieties and quality shall be used. When organic seed and plant materials are not available, conventional materials may be used provided that they have not been treated with pesticides not otherwise permitted by these standards.

After 2008 only organic sowing seed and plant material (both for annual and perennial crops) shall be used.

2.1.3.2
Seeds and plants collected from wild production, fulfilling the standards for in 1.4 (Minor Forest Products, wild harvested products and common/public land management) are considered being organic.

2.1.3.3
Where untreated conventional seeds and plant materials are not available, chemically treated seed and plant material may be used. The producer has to prove to UgoCert that chemically untreated seeds and plant material are not available.

2.2 Conversion

2.2.1General Principle

A conversion period enables the establishment of an organic management system and proves that the operator has serious intentions.

2.2.2 Recommendations

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

Practical farming skills, based on knowledge including indigenous knowledge, observation and experience are important for organic growers.

Conversion may be accomplished over a period of time. A farm may be converted by introduction of organic practices over the whole farm or by application of organic principles to only a portion of the farm gradually converting the whole farm.

The length of the conversion period should depend on:

- The past use of the land, including types of inputs applied
- The ecological context and its implications
- The experience of the operator

2.2.3 Standards

2.2.3.1
Plant products from annual production and pastures and open grazing land shall only be considered organic when a conversion period of at least 12 months has elapsed prior to the start of the production cycle. In the case of perennials (excluding pastures and meadows) a period of at least 18 months prior to harvest shall be required.

2.2.3.2
The conversion period shall start from the day of application to UgoCert.

2.2.3.3
If the operators can demonstrate/prove to the satisfaction of UgoCert that the lands have fulfilled the UOS for the last 3 years, the conversion time can be reduced.

2.2.3.4
UgoCert may extend the conversion period on a case-by-case basis depending on the past use of the land.

2.3 Parallel production

2.3.1 General Principle

Parallel production is not allowed in organic farming

2.3.2 Standards

2.3.2.1
A crop which is intended to be sold as certified according to the UOS, shall not be grown both as organic and conventional (or in conversion) on the same farm unit.

2.3.2.2
If the farm shall be converted piece meal (split) all organic and conventional parts shall be clearly and continuously separate

2.3.2.3
The operator shall demonstrate that the production does not rely on continuously switching from organic to conventional management

2.4 Diversity in Crop Production

2.4.1 General Principle

Soil and nutrients management is the foundation of organic production. 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.

2.4.2 Recommendations

Diversity in crop production is achieved by a combination of:
A diverse and versatile crop rotation that includes green manure, legumes and deep rooting plants appropriate coverage of the soil with diverse plant species for as much of the year as possible

2.4.3 Standards

2.4.3.1
Diversity in plant production shall be assured by a crop rotation and/or variety of plantings through interplanting. Operators are required to grow a diversity of crops of ecologically adapted and resistant to insects, weeds, diseases and other pest, while maintaining or increasing soil organic matter, fertility, microbial activity and general soil health.

2.4.3.2
Perennial crops shall be intercropped with other plants providing diversity. For crops that are normally grown as monocultures other plants shall be incorporated in the growing system.

2.5 Soil Fertility and Fertilization

2.5.1 General Principle

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

2.5.2 Recommendations

Biodegradable material of microbial, plant or animal origin produced from organic practices should form the basis of the fertility program.

Nutrient resources should be used in a sustainable and responsible manner. Nutrient losses from the farm to the natural environment should be minimized. Nutrients should be used in such a way and at appropriate times and places to optimise their effect.

Accumulation of heavy metals and other pollutants should be prevented.

Naturally occurring mineral fertilizers and brought-in fertilizers of biological origin permitted under these standards should be regarded as only one component of the nutrient system, and as a supplement to, and not a replacement for, nutrient recycling.

2.5.3 Standards

2.5.3.1
Material of microbial, plant or animal origin shall form the basis of the soil fertility program.

2.5.3.2
Nutrients and fertility products shall be applied in a way that protects soil, water and biodiversity. Restrictions will be based on amounts, location, timing, treatments, methods, or choice of inputs applied.

2.5.3.3
Material applied to the land or crop shall be in accordance with Appendix 1.

2.5.3.4
Manures containing human excrement (faeces and urine) are prohibited.

2.5.3.5
Mineral fertilizers in accordance with appendix 1 shall only be used for long-term fertility needs together with other techniques such as organic matter additions, green manures, rotations and nitrogen fixation by plants.

2.5.3.6
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.

2.6 Pest, Disease, Weed, and Growth Management

2.6.1 General Principles

Organic farming systems apply biological and cultural means to prevent unacceptable losses from pests, diseases and weeds. These systems 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 these standards.
Growth and development should take place in a natural manner.

2.6.2 Recommendations

Pests, diseases and weeds should be managed by the knowledgeable application of one, or a combination, of the following measures:

- Choice of appropriate species and varieties appropriate rotation programs
- Mechanical cultivation
- Protection of natural enemies of pests through provision of favourable habitat, such as hedges, nesting sites and ecological buffer zones that maintain the original vegetation to house pest predators
- Diversified ecosystems. For example buffer zones to counteract erosion, agro-forestry, rotating crops, intercropping etc.
- Seed bed preparation
- Natural enemies including release of predators and parasites
- Preparations from stone meal, farmyard manure or plants.
- Mulching and mowing
- Grazing of animals
- Physical controls such as traps, barriers, light and sound

2.6.3 Standards

2.6.3.1
All organic production systems shall display a set of positive processes/mechanisms capable of accounting for management of significant pests, weeds and diseases under normal circumstances.

2.6.3.2
Pest, disease and weed management products that are prepared at the farm from local plants, animals and microorganisms, are permitted when the measures in 2.6.2.are not sufficient. If the ecosystem or the quality of organic products might be jeopardized, the criteria in the Procedure to Evaluate Additional Inputs to Organic Agriculture (Appendix 3) in the IFOAM Basic Standards shall be used to establish whether the product is acceptable.

2.6.3.3
Physical methods for pest, disease and weed management are permitted, including the application of heat.

2.6.3.4
Input for plant pest, disease, weed, or growth management shall appear in appendix 2

2.6.3.5
All active ingredients in formulated inputs shall appear in Appendix 2. Formulated products with other active ingredients than in Appendix 2, shall be evaluated by the certification body.

2.7 Avoiding Contamination

2.7.1 General Principle

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

2.7.2 Recommendations

Operators should take reasonable measures to identify and avoid potential contamination.

In case of risk, or reasonable suspicion of risk, that contamination may occur; the certification body will set limits for the maximum application levels of heavy metals and other pollutants.

Accumulation of heavy metals and other pollutants should be limited and the appropriate remedial measures implemented where possible.

2.7.3 Standards

2.7.3.1
The operator shall employ measures including barriers and buffer zones to avoid potential contamination and limit contaminants in organic products.

2.7.3.2
In case of a reasonable suspicion of contamination UgoCert shall ensure that an analysis of the relevant products and possible sources of pollution (soil, water, air and inputs) is undertaken to determine the level of contamination and shall make the appropriate responses, such as detection of contamination sources, considering background contamination and other relevant factors.

2.7.3.3
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.

2.7.3.4
All equipment from conventional farming systems shall be thoroughly cleaned of potentially contaminating materials before being used on organically managed areas.

3. Animal Husbandry

3.1 General

3.1.1 General Principle

Organic livestock management is based on harmonious relationship between land, plants and livestock. All management techniques should respect physiological and behavioural needs of livestock and the feeding of good quality organically grown feed stuffs.

3.1.2 Recommendations

The operator should:

- Practice methods that reduce stress, promote animal health and welfare, prevent pests, parasites and diseases and avoid use of allopathic veterinary drugs
- Maintain appropriate stocking rates, herd sizes and rotations to allow natural behaviour and maintain natural resources and environment.
- Provide adequate good quality organically grown feedstuffs.
- Apply management practices that promote sustainable water and land use.

3.1.3 Standards

3.1.3.1

The operator shall ensure that the facilities, stocking rates and environment provides for:

- Ample access to fresh air, water, natural daylight and feed according to the need of the animal.
- Access to resting areas, shelter and protection from sun light temperature, rain, mud and wind to reduce animal stress.
- Construction materials and production equipment that do not pose a risk to human and animal health.
- Maintain sufficient free movement according to the needs of animals

3.1.3.2

Housing conditions shall ensure enough lying and resting area according to the physiological needs of the animals.

For all large animals (including sheep, goats, pigs) natural bedding material shall be provided when housed.

Housing shall be in the reach of the owner/caretaker.

- That poultry, rabbits and pigs shall not be kept in battery farming system.
- That animals are protected from predation by wild animals

3.1.3.3
Nomadic mode of livestock management is allowed on organic land

3.1.3.4
Tethering is allowed if it does not affect the well being of the animal. The animal shall have access to shade and water when needed and shall be given possibilities regularly to move freely. The tethering rope shall not give the animal wounds.

3.1.3.5
For welfare reasons, the herd or flock size shall not adversely affect behavioural patterns of animals.

3.1.3.6
Animals 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. Animals shall on a regular basis be allowed to move.

3.2 Conversion

3.2.1 General Principle

A conversion period enables the establishment of an organic management system and proves that the operator has serious intentions.

3.2.2 Recommendations

The whole farm should be converted to organic production.
For optimum sustainability of an agro ecosystem, all activities include crop production, animal husbandry and general environmental maintenance should be organized such a way that all elements of the farm activities interact and relate positively.

3.2.3 Standards

3.2.3.1
Animal products may be sold as certified according to the UOS after the land and animals have met the established conversion requirements below.

3.2.3.2
Animals converting to organic production shall under go a one-time minimum conversion period according to the following schedule and type of production.

Production

Conversion period.

Beef	12 months (1 year)
Pork	3 months
Poultry	6 weeks
Dairy	90 days (3 months)
Eggs	45 days (1.5 month)

3.3 Parallel production

3.3.1 General Principle:

Parallel production is not allowed in organic farming

3.3.2 Recommendation

Organic production systems require an on going commitment to organic production practices.

3.3.3 Standards

3.3.3.1
Simultaneous production of organic and non-organic products is not allowed.

3.3.3.2
The operator shall demonstrate that the production does not rely on continuously switching from organic to conventional management.

3.4 Animal sources/origin

3.4.1 General Principle

All animals should be born or raised on organic holdings.

3.4.2 Recommendation

Organic animal husbandry should depend on organic raising systems. Livestock obtained from off the farm should be from organic farms.

3.4.3 Standards

3.4.3.1
Animals shall be raised organically from birth. When organic livestock is not available, conventional animals may be brought in according to the following age limits:

- 2-day-old chicks for meat production.
- 9 weeks old hens for egg production.
- 2 weeks old for any other poultry.
- Piglets 2 months old.
- Calves up to 4 weeks old that have received colostrums and are fed mainly of whole milk
- Rabbits 3 weeks

3.4.3.2
Breeding animals may be brought in from conventional farms to a maximum of 10% in a year of the adult animals of the same species on the farm.

Where standards allow for exceptions of more than 10% these shall be limited to:

- Establishment of new type of animal
- Holdings with less than 10 animals.
- Unforeseen natural or man-made events.
- Considerable enlargement of the farm.

3.5 Breeds and breeding

3.5.1 General Principle

It is necessary to choose breeds, which can adapt to local conditions. Artificial insemination is permitted

3.5.2 Recommendations

Operators shall ensure that breeding goals are such that livestock diversity is maintained. Indigenous breeds should be preserved and promoted.
Reproduction should be natural. Brought-in animals should be adapted to local conditions. Animals shall be of good health

3.5.3 Standards

3.5.3.1
Embryo transfer techniques shall not be allowed except in cases of endangered indigenous breeds.

3.6 Mutilations

3.6.1 General principle

Organic farming respects the animals' distinctive characteristics.

3.6.2 Recommendations

Operators should select species and breeds that do not require mutilations. If necessary, mutilations should be made under minimum suffering.
Mutilations should only be done in case of safety, mitigation of suffering, health and welfare of animals.

3.6.3 Standards

3.6.3.1
Mutilations are prohibited, except when the animal suffering is minimized and anaesthetics used where appropriate.

- Castration.
- Tail-docking
- De-horning
- Ringing and nose punching

These practices should not cause unnecessary suffering.

3.7 Animal nutrition

3.7.1 General Principle

Organic animals should receive their nutritional needs from organic forage and feed of good quality that is produced from the farm itself and/or from the region.

3.7.2 Recommendations

Operators should offer a balanced diet that provides all nutritional needs of the animals in a farm allowing them to exhibit their natural feeding and digestive behaviour and their normal physical development. By products from organic processing industries not used for human consumption may be used.

Preservatives and antibiotics should not be used.

3.7.3 Standards

3.7.3.1
Animals shall be fed on organic feeds. Operators may feed a limited percentage of non-organic feed under specific conditions for limited time in the following cases.

- Organic feed is of inadequate quantity or quality.
- Areas where organic agriculture is in early stages of development.
- In no case may the percentage of non-organic feed exceed 15% dry matter per ruminant and 10% dry matter per non-ruminant calculated on annual basis.

- Operators may feed a limited percentage of non-organic feed under specific conditions for a limited time in the following cases.
- Unforeseen severe natural or man made events.
- Extreme climatic or weather conditions.
- Remote areas

3.7.3.2

More than 50% of feed shall come from the farm unit itself or be produced in cooperation with other organic farms in the region. UgoCert may allow exceptions.

3.7.3.3

The following products shall not be included in nor added to the feed or in any other way be given to farm animals:

- All types of excrements including droppings, dung among others.
- Farm animals by products (e.g. abattoir waste)
- Amino acid isolates and or other chemical agents.
- Urea and other synthetic nitrogen compounds.
- Synthetic growth promoters or stimulants.
- Antibiotics
- Preservatives, except when used as a processing aid
- Synthetic appetizers.
- Artificial colouring agents.
- Genetically engineered organisms or products there of.

3.7.3.4

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

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

3.7.3.5
All ruminants shall have daily access to roughage.

3.7.3.6
No synthetic chemical fodder preservatives are allowed. Products such as these may be used:

- Bacteria, fungi and enzymes.
- By products of feed industry (e.g. molasses)
- Plant based products.

3.7.3.7
Young stock from mammals shall generally be raised using systems, which rely on certified organic whole milk and shall be weaned only after a minimum time of 3 months that takes into account the natural behaviour of relevant animal species.

Operators may provide non-organic milk when organic milk is not available.

Operators may provide milk replacements as other substitutes on emergencies provided that they do not contain antibiotics synthetic additives and slaughter products.

3.8 Veterinary medicine

3.8.1 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.

3.8.2 Recommendations

Operators should maintain animal health and practice disease prevention through the following techniques:

- Selection of appropriate breeds or strains of animals.
- 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 defence of animals to stimulate natural immunity and tolerance to disease.
- Provision of good quality organic feed
- Appropriate stocking densities
- Grazing rotation and management.

Operators should use natural medicines and treatments. When illness does occur, the aim should be to find the cause and prevent future outbreaks by changing management practices.

3.8.3 Standards

3.8.3.1
The operator shall take all practical measures and preventive animal husbandry practices to ensure good health and well-being of the animals.

3.8.3.2
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. Producers shall not withhold medication where it will result in unnecessary suffering of the animal, even if the use of such medication will cause the animal to lose its organic status.

An operator may use veterinary chemical drugs only if:

- Preventive and alternative practices are unlikely to be effective to cure sickness or injury
- They are used under the supervision of a veterinarian, and
- Withholding periods shall be not less than double of that required by legislation, or a minimum of 48 hours, whichever is longer

3.8.3.3
Dry cow therapy is prohibited.

3.8.3.4
Substances of synthetic origin used to stimulate production or suppress natural growth are prohibited

3.8.3.5
Vaccinations are allowed with the following limitations:

- 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
- When a vaccination is legally required, and
- The vaccine is not genetically engineered

3.9 Transport and Slaughter

3.9.1 General Principle

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

3.9.2 Recommendations

Animals should be transported with the minimum frequencies and distances possible.
Animals should be inspected regularly during transport. The mode of transportation should be appropriate for each animal.

Animals should be watered and fed during transport.

Those responsible for transportation and slaughtering should employ stress-reducing measures, such as:

a. Allowing sufficient rest time to reduce stress
b. Maintaining existing group and social ties

c. Avoiding contact (sight, sound or smell) of each live animal with dead animals or animals in the killing process.

Each animal should be stunned before being bled to death. The equipment used for stunning should be in good working order. Exceptions can be made according to cultural practice. Where animals are bled without prior stunning this should take place in a calm environment.

Local and mobile slaughterhouses should be used when available.

3.9.3 Standards

3.9.3.1
Animals be handled calmly and gently during transport and slaughter

3.9.3.2
The use of electric rods and other such instruments is prohibited.

3.9.3.3
During transportation and slaughter, organic animals should be provided with conditions that minimize the adverse effects of:

- Loading and unloading
- Hunger and thirst

- Temperatures and relative humidity
- Quality and suitability of means of transport
- Stress
- Mixing different groups and sexes
- The specific needs of each animal

3.9.3.4
Animals shall not be treated with chemically synthetic stimulants prior or during transportation.

3.9.3.5
Journey to slaughterhouse shall not exceed 1 day. When transportation is slow, excess time can be allowed to the certified organic slaughterhouse

3.10 Bee keeping

3.10.1 General Principle

Bee keeping (Apiculture) is an important activity in Uganda. Bee products, especially honey are used in many cultural practices (Bride price in North Eastern Uganda, brewing in South Western Uganda, medicine, etc). It is also a major source of income and contributes to enhancement of agriculture through pollination.

3.10.2 Recommendations

All the principles of organic husbandry contained herein should be respected in the treatment and management of beehives.

Collection areas for honeydew, pollen and nectar should be (wide) large enough and varied to provide adequate and sufficient nutrition and access to water. The sources of natural nectar, honeydew and pollen should essentially consist of organically produced plants or naturally occurring wild vegetation.

In case of wild areas, the safety and integrity of the indigenous insect population and pollination needs of the native plants should be considered.

In case of feed shortages due to climatic or other exceptional circumstances the hives can be fed using organic feed.

The hives should be made of natural materials or materials that don't present risk to both bee products and environment.

Management should be based on prevention of disease favourable environment, selection of breeds, balanced diet and other appropriate husbandry practices.

During extraction and processing of honey products, temperatures should be kept below 45 degrees Celsius.

3.10.3 Standards

3.10.3.1
Hives shall be situated in unpolluted, natural areas or organically managed fields. The bees shall have access to water, honeydew and nectar/pollen from chemically untreated sources that will meet the nutritional needs of the bees.

3.10.3.2
At the harvest hives shall be left with reserves of honey and pollen sufficient for the colony to survive on.
Supplementary feeding can take place under a limited time at extreme weather conditions and other emergency cases, e.g. periods of heavy rain. Organic products shall be preferred as feedstuff but if not available conventional feed may be used.

3.10.3.3
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 requirements of these standards have been complied with for at least one year.

3.10.3.4
Use of materials with potentially toxic effects for construction of beehives is prohibited. Each beehive shall primarily consist of natural materials.

3.10.3.5
Beehives shall be labelled and easily identified.

3.10.3.6
In pest and disease control the following are permitted:

- Oxalic acetic acid
- Sulphur.
- Bacillus thuringiensis
- Lactic formic acid
- Natural essential oils e.g. (menthol, eucalyptol, camphor)
- Steam, direct flame and caustic soda for only hive disinfections
- Plants and plant based preparations
- Physical barriers

3.10.3.7
Where preventive measures fail, veterinary medical products may be used provided that:

- Preference is given to natural medicine, e.g. phyto-therapeutic and homeopathic treatment aid.
- If chemically synthesized medical products are used, the honey and other bee products shall not be sold as organic.
- Treated hives shall be placed in isolation and undergo a conversion period of one year.

The practice of destroying the male brood is permitted to contain infestation with *Varroa jacobsoni* (mites)

3.10.3.8
The health and welfare of the hive shall be by proper hygiene and hive management.

3.10.3.9
The destruction of bees in combs as a method of harvesting bee products is prohibited.

3.10.3.10
Artificial insemination of queen bees is at present prohibited.

3.10.3.11
During honey extraction use of chemical synthetic bee repellents is prohibited.

3.10.3.12
During honey extraction use of minimum smoke is allowed. Smoking materials of natural origin may be used.

4. Sustainable Wild Fisheries in Uganda

4.0 Introduction

These fishery standards have been created to promote sustainable fishing and processing. The standards are based on KRAV fisheries standards, 2004 and cover the entire chain of custody. The standards have been considerably rewritten to fit the conditions in Uganda and their application is geographically limited to Uganda because the work resulting in these standards could not take into consideration the conditions outside of Uganda.

Consumers must be able to trust eco-labelling and the standards shall encourage and facilitate trade in fish and shellfish products approved in accordance with the UOS. The procedures of the Certification Body on where and how decisions are taken to certify fishery activities, must be transparent. The standards shall facilitate trade with products produced in compliance with these Standards.

Those who wish to have their fishery production certified in accordance with the UOS, are responsible to prove to the certification body that they comply with the requirements. The Certification body will appoint a Fishery Advisory Team (FAT) for every fishery that applies for and is certified. The role and functions of the FAT are described in the policy for the Fishery Advisory Team. The standards for sustainable fishery are the very

first of its kind in Uganda. Although standard setting has been done with great care and stakeholders have been consulted, we regard them only as a work in process.

These standards will be regularly adjusted as more knowledge about fresh water fishery in Uganda is generated. Specifications for the type of fishery are given in 4.1.3

Every section begins with an outline of the principle that the specific standards aim at achieving even where it is not possible to realize such a principle in its entirety at present. The principles are followed by the rationale, which describes what the standards cover at present and why the specific issues are considered. Each chapter ends with a list of the requirements that must be fulfilled.

In the standards the word “fish” is used for the catch in the fishery even if the standard is for fish and shellfish. The use of “fish” is just to make the standards easier to read.

4.0.1 Fish production chain

Ugandan fisheries can be characterized as an artisanal fishery. Large numbers of fishermen are involved in fishing on the lakes and many middlemen (traders), suppliers, transporters, local retailers, processors and exporters are involved in the production chain. In this way, the Uganda fisheries support a significant proportion of the population.

Stakeholders of the Ugandan fisheries are:

- Fishermen
- Boat owners
- Middlemen (ice-boat owners, traders)
- Beach Management Units (BMU)
- Village Council (Local Council 1)
- Districts Fisheries Officers
- Transporters (traders)
- Processors
- Ice factory (processor)
- Department of Fisheries of the Ministry of Agriculture Animal Industry and Fisheries
- Research and other institutes (FIRI, LAKIMO, Zoology Department of Makerere University)
- Exporter (trader, who also could be the processor)
- Wholesale and retail: domestic, regional and international markets

The simplified production chain is shown in the figure 1.

These standards cover all these links in the production chain, in order to promote more sustainable fisheries practices, produced, processed and traded through a certified and transparent chain-of-custody.

4.0.2 Certification procedures

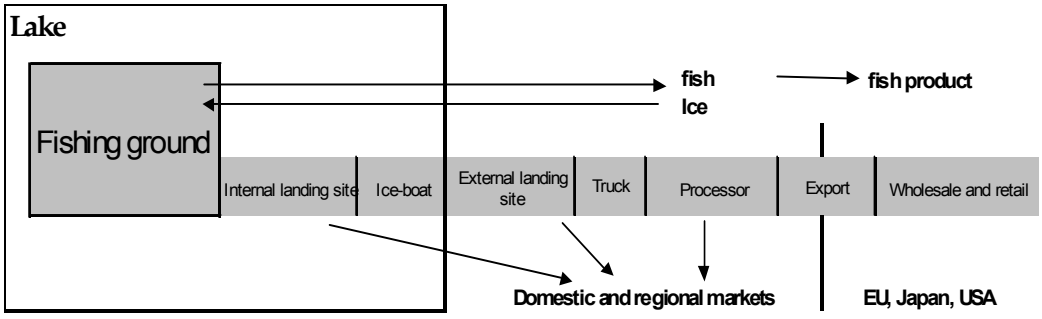
The certification body maintains and implements a certification system that guarantees independence. The system is described in the quality manual, the certification

manual, inspection manual and the certification body's policy for Evaluating ICS Projects. The procedure for certification of the fish production chain follows the procedures outlined in those documents and the additions contained in this standard.

4.0.3 Certification for marketing

These standards shall only be applicable in their entirety. A certification according to the standards may be called **"Organic certified"** or **certified according to the Uganda standard for management of sustainable freshwater fisheries"** or the equivalent in other languages. A product derived from a certified operation and fulfilling all parts of the standards may be marketed as "from Organic certified fishery" or the equivalent in other languages. These standards may be applied together with other voluntary labelling systems.

Figure 1



4.1 Sustainability of the fish stock

4.1.1 Principle

Certified fisheries are operated on stocks that are sustainable in the long-term and conducted in such a way that captures do not exceed the biological capacity. Design and mode of operation of gear should avoid long-lasting damage to the environment. Special attention will be paid to by-catches of birds, rare or protected animals and by-catches of undersized fish or other (fish) species that appear in considerable numbers.

4.1.2 Rationale

At this time, the information about Uganda's fishery and fish stocks is far from complete. Neither do we believe that all stocks can be assessed using the same criteria because the biological conditions are too varied. The best we can do is to convene a group of experts with high competence, give them guidelines, and circulate their conclusions for comments. This section contains the guidelines for the FAT's assessment of the stock's status. In Uganda, appearance of environmental toxins have been limited, so far, to incidents in the 1990's on Lake Victoria which involved deliberate poisoning of fish as a capture method. A simple assessment of the stock's load of environmental toxins shall be performed.

4.1.3 Requirements

4.1.3.1 Extent of fisheries

The collective fishery pressure on a stock may not exceed its production capacity or endanger the balance in the ecosystem.

4.1.3.2 Precautionary approach

Assessments of the size of stock shall apply the precautionary approach.

The precautionary approach is a set of measures that intend to minimize degrading or irreversible effects by human activity on aquatic ecosystems. These measures require that fishery management must evaluate and consider effects of fishing on fish stocks and the aquatic environment when deciding on a fishery.

4.1.3.3 Ensure reproduction

The precautionary approach means that fishery may not endanger the stock's future reproduction. A certified fishery can be permitted if the stock is assessed to be within safe biological limits. Safe biological limits means that the stock must contain the minimum critical spawning biomass and that fishery is not allowed to exceed the critical mortality. Biological data (e.g. size distribution of fish in samples and estimates of fish stock biomass) shall provide the basis for assessing the "spawning biomass" and fish mortality.

Exception

A certified fishery can be accepted even if there is a situation where the pressure of the stock is not possible to assess without extensive costs or where there is over fishing of the stock, if the certified fishery can lead to a positive impact and change in the collective fishery on the same stock to a sustainable fishery. Areas where there is serious over fishing cannot be approved for certified fisheries.

4.1.3.4 Basis for assessment

Assessment must be based on available data and relevant knowledge of the stock, methods, and gear. The FAT may recommend that the fishery be not approved, due to insufficient knowledge.

4.1.3.5 Data on the fish stock and its exploitation

The FAT shall consider as much data as is available on the fish stock, its exploitation and management. The FAT shall demonstrate how it has considered this information in their final recommendations. The Certfication body will make a final decision on which stock shall be open for Organic certified fishery and what methods and gear that may be used in Organic certified fishery on the stocks.

4.2 Fishing and transport boats

4.2.1 Principle

In the Ugandan fishery boats are used for fishing and transport of fish on the lake. The operations of boats should be well planned in order to cause the least possible environmental impact. Environmental impact results from the operation or maintenance of engines and from activities, such as fishing and transport. These standards shall promote boats exerting the least possible environmental burden.

4.2.2 Rationale

Canoes without engines will catch mostly tilapia and a part of the Nile perch. Canoes and small boats will catch major part of the Nile perch and a minor part of the tilapia with an outboard engine. Boats for transporting the fish from the primary landing site (at the lake's interior) to the secondary landing site (at the lake's coast at the place with access to roads) are all to be equipped with an (outboard) engine. Obviously, much of the standards mentioned in this chapter will refer to boats with engines.

Consumers' confidence in the products is essential for the standards. The emphasis is placed on the basic functions, such as compliance with current legislation, development of competence and other measures that are all considered to have positive effects on the environmental impact in the long run. Impure fuel and two-stroke engines cause

considerable discharges and should be phased out in certified fisheries. Toxic bottom paints are prohibited.

4.2.3 Requirements

4.2.3.1 Boats

Boats shall be officially registered as by national regulations and bear a well visible name and serial number.

4.2.3.2 Documentation and routines

All fishermen and boat-owners involved in a certified fishery have to be trained and well aware of standards and other requirements for certification. Trainings shall be documented.

4.2.3.3 Motors, fuel, hydraulic oil and lubricating greases

Fishing and transporting boats with engines shall change to a four-stroke engine when replacing a motor. Hydraulic oils used on-board shall preferably be eco-labelled. When more environmentally friendly fuel, oils and greases become available, the certification body will require their use.

4.2.3.4 Bottom paints

Paints containing tin may not be used for painting the bottom of fishing boats.

4.3 Fishing methods

4.3.1 Principle

The fishing method should be as gentle as possible for the environment. Hence, methods should keep by-catches (either undersized fish or fish from a non-target species) reduced to a minimum, they should not severely disturb the bottom, they should not disturb wildlife, vegetation etc.

Catching and landing fish always results in an environmental impact. To justify this impact the catch shall be handled with due respect. Hence, standards include measures to promote quality.

4.3.2 Rationale

Standards focus on traceability, to avoid ghost fishing (fish killed by lost nets) and avoid by-catches of organisms that cannot or may not be sold. The requirements for equipment for ensuring traceability are reduced for small boats with a limited range. Small fishing boats as presently used in Uganda cannot cover such large areas so that they change stock. However, boats can be transported from one lake to another. Fish can only be certified if a fishery trips starts and ends at a certified landing site. This is to assure quality of the produce, allow proper inspection of the fishery activity and a reliable proper registration.

Ugandan fishery is generally a single species fishery in the sense that a boat sailing out intends to harvest only one species. Nevertheless, by-catches of tilapia in the Nile perch fishery are common, just as Nile perch by-catches are common in the tilapia fishery. As long as minimum mesh sizes are respected, this does not interfere with the sustainability of the fishery. In principle, inspection of the fishery will concentrate more on usage of the right fishing gear, rather than checking composition of the catch. Boats are not permitted to carry any non certified gear. Fishermen wishing to change from a certified fishery to a non certified fishery should report so before starting a trip. Obviously, this is also required when changing from non-certified to a certified fishery.

4.3.3 Requirements

4.3.3.1 Adhering to laws and standards

All fisheries shall be carried out according to the applicable legislation. This means that if authorities prohibit certain fishing arts, close a fishing area, change legal sizes for fish to be landed or impose measures regarding transport or processing of the fish, these measures automatically also apply to the organic certified boats, crew, fishery and the other part of the production chain.

4.3.3.2 Permitted stock, gear and methods

The certification body determines what gear and methods are permitted when fishing a certain

stock. Gear shall mainly catch sexually mature individuals of the target species. Fishing methods that cause long-lasting or irreversible damage to the environment (such as damage to sensitive biotopes) will not be approved.

4.3.3.3 Permitted species for wild fisheries

i. Nile perch

Net fishing is permitted. Only gill netting of Nile perch with nets with minimum mesh size 127 mm (5 inch) is allowed. Nets are not allowed to be used together to create a smaller effective mesh size. All other arts of net fishing, such as beach seining, are prohibited. Nets must be lifted often so that the fish will never be caught in the net for more than 12 hours.

Line and hooks fishing on Nile perch is allowed with the condition that only hooks of minimum size 9 are used. Line and hooks are not allowed to remain in the water for longer than 18 hours.

Fishing Nile perch by other arts than by gill nets and line & hook fishing is not allowed.

ii. Tilapia

Net fishing is permitted. Only gill netting of tilapia with nets with minimum mesh size 127 mm (5 inch) is allowed. Nets are not allowed to be used together to create a smaller effective mesh size. All other arts of net fishing, such as beach seining, are

prohibited. Nets must be lifted so often so that the fish will never be caught in the net for more than 12 hours.

Fishing tilapia by other arts than by gill nets is not allowed.

4.3.3.4 Gear on-board

A certified fishing boat may not have any forbidden gear on-board.

4.3.3.5 Damaged gear

Damaged gear shall be taken ashore for repairs or destruction. Ghost fishing shall be avoided 'at all costs'.

4.3.3.6 By-catches of aquatic mammals, birds and invertebrates

All by-catches of non-target species of mammals, birds and invertebrates shall be documented and reported to the certification body.

4.3.3.7 Storing

The catch shall be put on ice as soon as possible and shall never be stored in direct sunlight.

4.3.3.8 Documentation of the fishing trip

It shall be documented where the catch was taken. If a whole lake is included without exceptions this is not needed.

4.4 Handling, processing and transport

4.4.1 Principle

Fish landed, transported and processed according to these standards are healthy and of superior quality. In connection with the landing, sale and further transport to the wholesalers and processing industry, certified fish shall be kept separately from non- certified fish. Additives and other raw materials not originating from the lake, processing aids, flavour enhancers and similar shall come from natural sources or be produced with environmentally adapted methods. Disposal of waste must meet the highest possible requirements for sorting and recycling. Transport and processing shall aim to reduce energy consumption and use the best available fuels and technologies.

4.4.2 Rationale

Ugandan fishery production chains contain several links before the fish is landed at a secondary (exterior) landing site (appendix 4). In these first links of the production chain standards will emphasis proper handling of the fish (hygiene) and transparency. Hence, a minimal infrastructure and a proper registration at the primary landing sites 'on-the-lake' are essential. These standards prioritise traceability and quality of the product. In this way the consumer can trust the fact that the fish has been caught and handled in compliance with the UOS. Proper handling of the fish immediately after the catch (e.g. by cooling or by application of life-keeping devices) will enhance product quality.

4.4.3 Requirements

This chapter of the standards covers all handling of fish from the fishermen to the final processing and packing.

The standards in UOS chapter 5 on Processing and handling also apply for sustainable fisheries certified to these standards. Below is a further elaborated standard in this area.

4.4.3.1 Operator‘s responsibility

The operator is responsible to ensure that the standards are followed during all steps of the fishery from fishing to selling the final product. The certification includes all parties involved in the fishery (e.g. fishermen, boat owners, middlemen, buyers, processors and sellers of the fish). *As the fishery systems often are complicated, the certification body will in each individual case decide on how the line of responsibility will flow from the operator to all other parties involved in the certified fishery.*

4.4.3.2 Separation of certified products from conventional products

All handling of fish through all steps of the fishing and handling chain shall be done so that certified fish is not mixed with conventional fish. This includes the handling from catching fish to final packaging.

If certified fish is handled together with conventional fish (for example in ice storage containers) is has to be marked so that it can be separated from conventional fish. *(An example of possible methods of marking is to cut off a part of the tail or to perforate the fish tail with a special tool, which could make an exclusive marking.)*

4.4.3.3 Buying and selling the catch

The fishermen and boat owners shall only sell own catch to the appointed buyer (middleman on the lake or buyer at the landing site). Fishermen and boat owners are not allowed to buy fish from others. Middlemen and buyers have to document bought in amounts and who they are buying from and the time of purchase.

4.4.3.4 Storage and transport of fish

Between fishing ground and processor, preservation of fish is only allowed by cooling. Fish should be kept at temperatures of 7°C or lower. Ice used for cooling must be of tap-water quality and may not contain any unallowed additives. Contaminated ice (soil, chemicals, etc.) shall not be used.

4.4.3.5 Requirements for the operator

Processors shall have a clear environmental policy with targets, both in short and long terms as well an action plan to reach the targets (Annex B). Documentation must contain defined objectives.

These will be checked during certification inspections.

4.4.3.6 Environmental protection

Operators shall act to protect the environment to the greatest possible extent.

4.4.3.7 Cleaning agents and other chemicals used

Environmentally adapted products shall be the first choice. If these are not available, the least harmful products and methods with regard to the environment shall be chosen. Oils and fuels shall, if possible, be of non-fossil, plant or animal origin. Cleaning products, rust proofing agents and degreasers shall be environmentally adapted. Heavy-duty cleaners used may not contain ingredients classified as carcinogenic, causing mutations or disruptive of reproduction. Environmentally adapted paints and solvents shall be the first choice. Impregnated wood (creosote, copper or arsenic) shall be avoided

4.4.3.8 Waste

Waste shall be collected, stored and further treated so that it does not contaminate the environment. Waste shall be recycled where it is possible or otherwise stored or destroyed in the environmentally friendly way.

4.4.3.9 Energy consumption

Energy consumption shall be minimized. Renewable energy shall be used where possible. Energy consumption shall be documented.

4.4.3.10 Documentation of environmental measures

Documentation of the company's environmental measures shall be produced.

4.4.3.11 Yield

The processor should strive to reduce the amount of waste as much as possible, e.g. by upgrading fish waste to products used for human consumption or promote its usage in animal feed.

4.5 Organic labelling

4.5.1 Principle

Organic fish products have to be identified from other products at all times throughout the production chain to the point of sale to the final consumer through marking or labelling. Only fish products that came through such a system and have been certified should be presented to consumers with a claim that it is an organic fish product.

4.5.2 Rationale

Organic fish products should bear clear labels and marks to enable consumers to identify certified organic fish products from other types of fish products. The

production chain should also be labelled for identification by staff of the operators, inspectors from the certification body and other relevant stakeholders.

4.5.3 Requirements

4.5.3.1 Organic production chain

The operator shall clearly identify the fishing grounds; fishermen, fish boats, equipment tools, storages and documents used in the production chain for organic fish products, with appropriate marks and labels. These marks and labels shall be described in the operator's internal control system manual.

4.5.3.2 Operator labels

The operator can use own organic labels and markings for fishing grounds, fishermen, fishing boats, equipment, tools, storages and documents used in the organic fish production chain and on the fish products from certified organic fish products. These shall be clearly described in the operator's internal control system manual. Where the operator chooses to use only their own mark or labelling on the fish product, the certification mark of the certification body shall clearly be included near the operator's own mark or labelling. Detailed guidelines on labelling are given in chapter 6.

4.5.3.3 Usage of organic label

The organic mark (Organic Fish Mark) is a mark of conformity to the UOS and can be used by

certified operators. Specifications for labelling and use of the organic Fish mark are given in the chapter 5 of the UOS. The Certification body will authorize recognized certifiers to re-certify its certified products if the need arises

4.6 Social Justice

4.6.1 Principle

Certified products should be produced under acceptable social and working conditions.

4.6.2 Rationale

The fishery industry in Uganda is based upon a small-scale fishery operating on large and many times very remote areas of the national territory. The certification body will check (control) on social justice aspects from the very beginning of the chain on the lake up to the consumer. However, social justice aspects are not as easy to measure as mesh size or fish length. Control on so many small boats operating in such large lakes will always have its limitations. In case obvious violations on social justice aspects appear to the certification body, the operator (processor) will be informed and, if required, the certification body will punish for the violations.

4.6.3 Requirements

4.6.3.1 Social justice

The Social Justice standards are specified in chapter 7.

5. Processing and Handling

5.1 General.

5.1.1 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.

5.1.2 Recommendations

Handlers and processors should handle and process organic products separately from conventional products both in space and time.

5.1.3 Standards

5.1.3.1
Handlers and processors shall not mingle/mix non organic with organic products.

5.1.3.2
All organic products shall be clearly identified as such, and stored and transported in such a way that prevents contact with conventional products through out the entire process.

5.1.3.3
The handler and processor shall take all necessary measures to prevent organic products from being contaminated.

5.2 Ingredients.

5.2.1General principle

Organic processed products are made from organic products.

5.2.2 Standards

5.2.2.1
All ingredients used in organic processed products shall be organically produced except for those additives and processing aids in Appendix 3. In cases where an ingredient of organic origin is unavailable in sufficient quality or quantity, the certification body may authorize use of non-organic raw materials subject to periodic review and re-evaluation.

5.2.2.2
Water and edible salt may be used as ingredients in production of organic products and are not included in the percentage calculations of organic ingredients.

5.2.2.3
All additives and processing aids used in organic food shall be found in Appendix 3.

5.2.2.4
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.

5.2.2.5
Preparations of enzymes and microorganisms used in food processing may be used with the exception of genetically engineered microorganisms and their products. Processors shall use microorganisms grown on organic substrates. Cultures prepared and multiplied in-house must conform to organic requirements.

5.3 Processing methods

5.3.1 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.

5.3.2 Recommendations

Organic products should be processed in a way that maintains nutritional value.
Processors should choose methods that limit the number and quantity of non-organic additives and processing aids.

5.3.3 Standards

5.3.3.1
Techniques used to process organic food shall be biological, physical or mechanical.

5.3.3.2
Extraction shall only take place with water, ethanol, plant and animal oils, vinegar, carbon dioxide and nitrogen. These shall be of quality appropriate for their purpose.

5.3.3.3
Irradiation is not permitted.

5.3.3.4
Filtration techniques that chemically react with or modify organic food on a molecular basis are restricted. The certification body will decide on accepted filtration techniques. Filtration equipment shall not contain asbestos, or utilize techniques or substances that may negatively affect the product.

5.3.3.5
The following conditions of storage are permitted
Controlled atmosphere
Temperature control
Drying
Humidity

5.3.3.6
Ethylene gas is permitted for ripening.

5.4. Pest and disease control

5.4.1 General principle

Organic food is protected from pests and diseases by the use of manufacturing practices that include proper cleaning, sanitation and hygiene.

5.4.2 Recommendation

Recommended treatments are: Physical barriers, sound, ultra sound light and UV – light, traps (including

pheromone traps and static bait traps), temperature control, controlled atmosphere and diatomaceous earth.

5.4.3 Standards

5.4.3.1.
To manage pests the following methods shall be used:

- Preventative methods such as disruption, elimination of habitat and access to facilities
- Mechanical, physical and biological methods
- Substances according to the Appendices of theses standards
- Substances (other than pesticides) used in traps

5.4.3.2
When the above methods have been proved not successful, conventional pest and disease control can be used. The use shall not contaminate the organic product. Organic products shall be moved out of the treated area and the operator shall take necessary precautions to prevent contamination and include measures to decontaminate the equipment or facilities. Direct use or application of a prohibited method or material to organic products renders the product no longer organic.

5.4.3.3
Prohibited substances and methods for pest and disease control:

- Fumigation with ethylene oxide, methyl bromide, aluminum

phosphide
- Ionizing radiation (irradiation)

5.5. Packaging

5.5.1 General principle

Organic product packaging has minimal adverse impacts on the product or on the environment.

5.5.2 Recommendations

- Processors of organic food should avoid unnecessary packaging materials.
- Organic food should be packaged in suitable re-usable, recycled, recyclable and biodegradable packaging whenever possible.

5.5.3 Standards

5.5.3.1
Packaging material shall not contaminate food.

5.5.3.2
Packaging materials, storage containers or bins that have been treated with synthetic fungicide, preservation or fumigant are prohibited.

5.5.3.3
Organic produce shall not be packaged in reused bags or containers that are likely to compromise the organic integrity of the product.

6. Labelling

6.1 General

6.1.1General Principle

Organic products are clearly and accurately labelled as organic.

6.1.2 Recommendations

When all requirements have been met, the products should be labelled with the "Organic Certification" mark.

- Name and address of legal person responsible for the production of the organic produce should be included below the mark.
- Product labels should also identify ingredients, processing methods and additives and processing aids. All components of additives and processing aids should be declared. Shelf life, quality, volume and processing date should also appear on the product.

Labels should contain advice on how to obtain additional product information.

Wild products or ingredients should be declared as wild rather than organic unless if they are certified organic.

6.1.3 Standards

6.1.3.1
The person or company legally responsible for production or processing of the product shall be identified.

6.1.3.2
Mixed products where not all ingredients, including additives, are of organic origin and products that are entirely in compliance with these standards shall be labelled in the following way (percentages in this section refer to raw material weight)

- Where a minimum of 95% of the ingredients are of Organic certified origin, products may be labelled “certified organic” and should carry the ‘Organic Certification ’ mark
- Where less than 95% but not less than 70% of the ingredients are of organic certified origin, products may not be called "organic". The word "organic" may be used on the principal display in statements like "made with organic ingredients" provided there is a clear statement of the proportion of the organic ingredients. The organic certification mark should be used; the indication of

proportion of organic ingredients shall be displayed close to it.

- Where less than 70% of the ingredients are of certified organic origin, the indication that an ingredient is organic may appear in the ingredient list. Such product may not be called "organic".

6.1.3.3
All ingredients shall be listed on the product label in order of their weights percentage. It shall be apparent which ingredients are of organic origin and which are not. All additives shall be listed in full names.

6.1.3.4
Added water and salt shall not be included in percentage calculations of organic ingredients.

6.1.3.5
Organic products shall not be labelled 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.

7. Social Justice

7.1 General

7.1.1 General Principle

Social justice and social rights are an integral part of organic agriculture and processing.

7.1.2 Recommendations

Operators should comply with all ILO conventions relating to labour welfare and the UN charter of rights for children

All employees and their families should have access to portable safe water, food, education, transportation, housing and health services.

Operators should provide for the basic social security needs including benefits like maternity, sickness and retirement benefits.

All employees should have equal opportunity and adequate wages when performing the same level of work regardless of colour, creed and gender.

Workers should have a safe and healthy working environment.

Workers should have adequate protection from noise, dust, light and exposure to chemicals that should be within acceptable limits in all production and processing operations.

Operators shall respect the rights of indigenous peoples, shall not use land that is under dispute regarding legal or customary local rights, or use or exploit land whose people are impoverished, killed, exiled or expelled

Labour contracts should be open, fair and honoured in good faith.

All people concerned in organic operations shall have equal opportunities. There should not be any discrimination.

7.1.3 Standards

7.1.3.1
Operations shall have a policy on social justice. Operators who hire fewer than 10 persons for labour are not required to have such a policy

7.1.3.2
In case where the production is based on violation of the UN declaration of human rights, that product shall not be declared organic.

7.1.3.3
Operations shall not use forced or involuntary labour.

7.1.3.4
Employees and contractors of organic operator shall have the freedom to associate the right to organize and the right to bargain collectively.

Appendices

Introduction to Appendices

In organic agriculture, the maintenance of soil fertility is achieved through the recycling of minerals and organic matter where the nutrients are made available to crops through cultural practices. Organic foods are processed primarily by biological, mechanical and physical mean. Taking into consideration factors such as contamination, risk of nutritional imbalances, importation of inputs from outside the farm, and depletion of natural resources, the use of many of these inputs listed in Appendix 1 and 2 is already restricted.

Any operator that wants to use a product that is not on these lists must submit a request for the inclusion of that product in the list, giving arguments for it. The certification body has developed criteria and procedures for this that is available on request. Where there is doubt whether products should be included in the appendices the precautionary principle should be applied.

Appendix 1 Products for Use in Fertilization and soil conditioning

Substances description, compositional requirements

1. Plant and Animal Origin

- Farmyard manure, slurry and urine
- Vermicastings – worm droppings.

- Bone meal, bone, meat meal, blood meal, meat meal, feather meal, fish and fish products, wool, fur, hair, dairy products.
- Biodegradable processing by products of food, feed, oilseed brewery, distillery or textile processing.
- Crop and vegetable residues, mulch, green manure, straw charcoal
- Seaweed and seaweed products.
- Plant preparations and extracts
- Compost made from ingredients listed in this appendix, spent mushroom waste, humus from worms and insects, urban waste from separated sources, which are monitored for contamination.

2. Mineral Origin.

- Basic slag
- Calcareous and magnesium amendments.
- Limestone, gypsum, marl, maerl, chalk, calcium chloride.
- Magnesium rock, kieserite and Epsom salt (magnesium sulphate)
- Mineral potassium (e.g. sulphate of potash, muriate of potash, kainite, sylvanite, patentkali)
- Natural phosphates.
- Pulverized rock, stone meal
- Clay (e.g. bentonite, perlite, vermiculite, zeolite)
- Sodium chloride
- Trace elements
- Sulphur

3. Microbiological.

- Biodegradable processing by products of microbial origin, e.g. by products of brewery or distillery processing
- Microbiological preparations based on naturally occurring organisms

Appendix 2 Crop Protectants and Growth Regulators

Substances Description, compositional requirements.

1. Plant and Animal Origin e.g.

- Algal preparations.
- Animal preparations and oils.
- Beeswax
- Chitin nematicides (natural origin)
- Coffee grounds.
- Dairy products (e.g. milk, casein)
- Gelatine
- Lecithin
- Natural acids (e.g. vinegar)
- Neem (*Azadirachta indica*)
- Plant oils
- Plant preparations.
- Plant based repellents.
- Crop oils
- Pyrethrum (*Chrysanthemum cinerariaefolium*) The synergist piperonyl butoxide is prohibited after 2005

- Quassia (*Quassia amara*)
- Rotenone (*Derris elliptica, Lonchocarpus spp. Thephrosia spp*
- Ryania (*Ryania speciosa*)
- Sabadilla (*Schoenocaulon officinale*)
- Tobacco tea (pure nicotine is forbidden) *Nicotina tabacum*

2. Mineral Origin

- Chloride of lime.
- Clay (e.g. bentonite, perlite, vermiculate, zeolite).
- Copper salts (e.g. sulphate, hydroxide, oxychloride, Octanoate)
- Diatomaceous earth
- Light mineral oils (paraffin)
- Lime sulphur (calcium polysulfide)
- Potassium permanganate
- Quick lime, Calcium oxide
- Silicates (e.g. sodium silicates, quartz)
- Sodium bicarbonate
- Sulphur

3. Micro organisms

- Fungal preparations
- Bacterial preparations
- Release to parasites and predators
- Viral preparations (e.g. granulosis virus)

4. Others

- Calcium hydroxide
- Carbon dioxide

- Ethyl alcohol
- Homeopathic preparations
- Sea salt and salty water
- Soda
- Soft soap
- Sterilized insects
- Sulphur dioxide

5. Traps, Barriers, Repellents

- Physical methods (e.g. chromatic traps, mechanical traps)
- Pheromones in traps dispensers only.

Appendix 3 List of Approved Additives and Processing Aids

Where the substances listed in this annex can be found in nature, natural sources are preferred. Substances of certified organic origin are preferred.

Int'l Numbering System	Product	Additive	Processing Aid	Limitation/Note
INS 170	Calcium carbonate	X	X	
INS 181	Tannin		X	Only for wine
INS 184	Tannic acid		X	Filtration aid for wine
INS 220	Sulphur dioxide	X		Only for wine
INS 224	Potassium met bisulphite	X		Only for wine
INS 270	Lactic acid	X	X	
INS 290	Carbon dioxide	X	X	
INS 300	Ascorbic acid	X		
INS 306	Tocopherols, mixed natural concentrates	X		
INS 322	Lecithin	X	X	
INS 330	Citric acid	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 titrate	X	X	
INS 341	Monocalcium phosphate	X		Only for “raising flour
INS 342	Ammonium phosphate	X		Restricted to 0.3 gm/1 in wine
INS 400	Alginic acid	X		
INS 401	Sodium alginate	X		
INS 402	Potassium alginate	X		
INS 406	Agar	X		
INS 407	Carrageen an	X		
INS 410	Locust bean gum	X		
INS 412	Guar gum	X		
INS 413	Tragacanth gum	X		
INS 414	Arabic gum	X		Only for milk products, fat products, confectionary, sweets, eggs.
INS 415	Xanthan gum	X		Only fat, fruit and vegetable products and cakes and biscuits.
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	Magn esium 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	Sulphuric acid		X	pH adjustment of water during sugar processing
INS 516	Calcium sulphate	X		For soybean products, confectionery and in bakers' yeast

INS 517	Ammonium sulphate	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	for wine, fruit and vegetable processing
INS 553	Talc		X	
INS 901	Beeswax		X	
INS 903	Carnauba wax		X	
INS 938	Argon	X		
INS 941	Nitrogen	X	X	
INS 948	Oxygen	X	X	
	Activated carbon		X	
	Bentonite		X	only for fruit and vegetable products
	Casein		X	only for wine

	Diatomaceous earth		X	Only for sweeteners and wine
	Egg white albumen		X	Only for wine
	Ethanol		X	
	Gelatine	X	X	Only for wine, fruit and vegetable
	Isinglass		X	Only for wine
	Kaolin		X	
	Perlite		X	
	Preparations of bark		X	Only for sugar

Flavouring Agents

- Organic flavouring extracts (including volatile oils)
- Volatile (essential) oils produced by means of solvents such as oil, water, ethanol, carbon dioxide and mechanical and physical processes
- Natural smoke flavour
- Natural flavouring preparations are only to be approved based on the Procedure to
- Evaluate Additives and Processing Aids (Appendix 5) in the IFOAM Basic Standards.

Preparations of Micro-organisms and Enzymes for use in food processing (see 5.2.2.5)

- These may be used as ingredient or processing aids with approval based on the

- Procedure to Evaluate Additives and Processing Aids for Organic Food Products
- (Appendix 5) in the IFOAM Basic Standards.
- Organic certified microorganisms
- Preparations of microorganisms
- Enzymes and enzyme preparations.

Appendix 4: Registration and inspection/control issues

1.1 General

Certification is only possible if the production chain is transparent and adequate inspection is possible. To achieve this, a number of issues have to be well documented, registration has to be up-to-date and all relevant documentation has to be made available to the certification body when needed

1.2 Requirements

As minimal requirement to obtain sustainable fishery certification, the following data of the production chain have to be available:

Fishing boats

- Registration (ID number, owner) by BMU
- Safety aspects
- Provisions for transport of fish
- Environment (paint, soap, oil, etc.)

Fishery

- Registration of fishermen / crew of the boat (by the local BMU)
- Registration of outboard motor and other equipment
- Registration of nets (identification and description (mesh size, twine etc.), owner
- Registration of the catch, divided in targeted species (Nile Perch, Tilapia and other)
- Registration of by-catch such as birds, mammals, rare species, etc.

Landing site

- At certification inspection of: map (of fishing grounds and all landing sites in the area), hygiene inspection, fence, etc.
- Registration of ice boats / middlemen
- Registration of buyers/transporters / middlemen / trucks of processor

Processor

- Registration of certifications, such as HACCP, ISO etc.
- Registration of arrival time and origin of fish for each middlemen
- Reports on fish quality and sizes, report on rejects (undersized, poor quality)
- Product registration by batch

For Information and Training services contact NOGAMU:
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For Inspection and Certification services contact UgoCert (UgoCert is the only certification body that certifies against the UOS, Any certification body that may be interested in certifying against the UOS should first seek permission from UgoCert
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