SECTION – 3
NATIONAL STANDARDS FOR ORGANIC PRODUCTION

3.1 CROP PRODUCTION AND ANIMAL HUSBANDRY IN GENERAL

3.1.1 Conversion Requirements

General Principles

Organic agriculture means a process of developing a viable and sustainable agro ecosystem.

The time between the start of organic management and certification of crops and/or animal husbandry is known as the conversion period.

The whole farm, including livestock, should be converted according to the standards over a period of **three years**.

Recommendations

For a sustainable agro-ecosystem to function optimally, diversity in crop production and animal husbandry must be arranged in such a way that there is interplay of all the elements of the farming management.

Conversion may be accomplished over a period of time. A farm may be converted step by step.

The totality of the crop production and all animal husbandry should be converted to organic management.

There should be a clear plan of how to proceed with the conversion. This plan shall be updated if necessary and should cover all aspects relevant to these standards.

The certification programme should set standards for different farming systems so that they can be clearly separated in production as well as in documentation, and the standards should determine norms to prevent a mix up of input factors and products.

Standards

3.1.1.1.

The standards requirements shall be met during the conversion period. All the standards requirements shall be applied on the relevant aspects from the Beginning of the conversion period itself.

3.1.1.2.

If the whole farm is not converted, the certification programme shall ensure that the organic and conventional parts of the farm are separate and inspectable.

3.1.1.3.

Before products from a farm/project can be certified as organic, inspection shall have been carried out during the conversion period. The start of the conversion period may be calculated from the date of application of the certification programme or from the date of last application of unapproved farm inputs provided it can demonstrate that standards requirements have been met from that date of implementation.

For the length of conversion periods, please refer to sections 3.2.2 and 3.3.2.

3.1.1.4
Simultaneous production of conventional, organic in conversion and/or organic crops or animal products which cannot be clearly distinguished from each other, will not be allowed.

3.1.1.5.
To ensure a clear separation between organic and conventional production, a buffer zone or a natural barrier should be maintained. The certification programme shall ensure that the requirements are met.

3.1.1.6.
A full conversion period is not required where de facto full standards requirements have been met for several years and where this can be verified through several means and sources. In such cases inspection shall be carried out with a reasonable time interval before the first harvest.

3.1.2 Maintenance of Organic Management

General Principles
Organic certification is based on continuance.

Recommendations
The certification programme should only certify production which is likely to be maintained on a long-term basis.

Standards

3.1.2.1.

Converted land and animals shall not get switched back and forth between organic and conventional management.

3.1.3 Landscape

General Principles

Organic farming should contribute beneficially to the ecosystem.

Recommendations

Areas which should be managed properly and linked to facilitate biodiversity:

- Extensive grassland such as moorlands, reed land or dry land

- In general all areas which are not under rotation and are not heavily manured
- Extensive pastures, meadows, extensive grassland, extensive orchards, hedges, hedgerows, groups of trees and/or bushes and forest lines
- Ecologically rich fallow land or arable land
- Ecologically diversified (extensive) field margins
- Waterways, pools, springs, ditches, wetlands and swamps and other water rich areas which are not used for intensive agriculture or aqua production
- Areas with ruderal flora.
- The certification programme shall set standards for a minimum percentage of the farm area to facilitate biodiversity and nature conservation.

Standards

3.1.3.1.
The certification programme shall develop landscape and biodiversity standards.

3.2 CROP PRODUCTION

3.2.1 Choice of Crops and Varieties

General Principles

All seeds and plant material should be certified organic.

Recommendations

Species and varieties cultivated should be adapted to the soil and climatic conditions and be resistant to pests and diseases.

In the choice of varieties genetic diversity should be taken into consideration.

Standards

3.2.1.1
When organic seed and plant materials are available, they shall be used. The certification programme shall set time limits for the requirement of certified organic seed and other plant material.

3.2.1.2.
When certified organic seed and plant materials are not available, chemically untreated conventional materials shall be used.

3.2.1.3.
The use of genetically engineered seeds, pollen, transgene plants or plant material is not allowed.

3.2.2 Duration of Conversion Period

General Principles

The establishment of an organic management system and building of soil fertility requires an interim period, the conversion period. The conversion period may not always be of sufficient duration to improve soil fertility and re-establish the balance of the ecosystem but it is the period in which all the actions required to reach these goals are started.

Recommendations

The duration of the conversion period must be adapted to:

- the past use of the land
- the ecological situation

Standards

3.2.2.1.

Plant products produced can be certified organic when the national standards requirements have been met during a conversion period of at least two years before sowing or in the case of perennial crops other than grassland, at least three years (thirty-six months) before the first harvest of products. The accredited inspection and certification agency may decide in certain cases (such as idle use for two years or more) to extend or reduce the conversion period in the light of previous status of the land but the period must equal or exceed twelve months.

3.2.2.2.

The conversion period can be extended by the certification programme depending on, e.g., past use of the land and environmental conditions.

3.2.2.3.

The certification programme may allow plant products to be sold as "produce of organic agriculture in process of conversion" or a similar description during the conversion period of the farm.

3.2.2.4.

For the calculation of inputs for feeding, the feed produced on the farm unit during the first year of organic management, may be classified as organic. This refers only to feed for animals which are themselves being reared within the farm unit and such feed may not be sold or otherwise marketed as organic. Feed produced on the farms in accordance with the national standards is to be preferred over conventionally grown / brought-in feeds.

3.2.3 Diversity in Crop Production

General Principles

The basis for crop production in gardening, farming and forestry in consideration of the structure and fertility of the soil and surrounding ecosystem and to provide a diversity of species while minimising nutrient losses.

Recommendations

Diversity in crop production is achieved by a combination of:

- a versatile crop rotation with legumes

- an appropriate coverage of the soil during the year of production which diverse plant species

Standards

3.2.3.1.

Where appropriate, the certification programme shall require that sufficient diversity is obtained in time or place in a manner that takes into account pressure from insects, weeds, diseases and other pests, while maintaining or increasing soil, organic matter, fertility, microbial activity and general soil health. For non perennial crops, this is normally, but not exclusively, achieved by means of crop rotation.

3.2.4 Fertilisation Policy

General Principles

Sufficient quantities of biodegradable material of microbial, plant or animal origin should be returned to the soil to increase or at least maintain its fertility and the biological activity within it.

Biodegradable material of microbial, plant or animal origin produced on organic farms should form the basis of the fertilisation programme.

Recommendations

Fertilisation management should minimise nutrient losses.

Accumulation of heavy metals and other pollutants should be prevented.

Non synthetic mineral fertilisers and brought in fertilisers of biological origin should be regarded as supplementary and not a replacement for nutrient recycling.

Adequate pH levels should be maintained in the soil.

Standards

3.2.4.1.

Biodegradable material of microbial, plant or animal origin shall form the basis of the fertilisation programme.

3.2.4.2.

The certification programme shall set limitations to the total amount of biodegradable material of microbial, plant or animal origin brought onto the farm unit, taking into account local conditions and the specific nature of the crops.

3.2.4.3.

The certification programme shall set standards which prevent animal runs from becoming over manured where there is a risk of pollution.

3.2.4.4.

Brought-in material (including potting compost) shall be in accordance with Appendix I.

3.2.4.5.

Manures containing human excreta (faeces and urine) shall not be used.

3.2.4.6.
Mineral fertilisers shall only be used in a supplementary role to carbon based materials. Permission for use shall only be given when other fertility management practices have been optimised.

3.2.4.7.
Mineral fertilisers shall be applied in their natural composition and shall not be rendered more soluble by chemical treatment. The certification programme may grant exceptions which shall be well justified. These exceptions shall not include mineral fertilisers containing nitrogen (see Appendix 1).

3.2.4.8.
The certification programme shall lay down restrictions for the use of inputs such as mineral potassium, magnesium fertilisers, trace elements, manures and fertilisers with a relatively high heavy metal content and/or other unwanted substances, e.g. basic slag, rock phosphate and sewage sludge (Appendix I).

3.2.4.9.
Chilean nitrate and all synthetic nitrogenous fertilisers, including urea, are prohibited.

3.2.5 Pest, Disease and Weed Management including Growth Regulators

General Principles

Organic farming systems should be carried out in a way which ensures that losses from pests, diseases and weeds are minimised. Emphasis is placed on the use of a balanced fertilising programme, use of crops and varieties well-adapted to the environment, fertile soils of high biological activity, adapted rotations, companion planting, green manures, etc.
Growth and development should take place in a natural manner.

Recommendations

Weeds, pests and diseases should be controlled by a number of preventive cultural techniques which limit their development, e.g. suitable rotations, green manures, a balanced fertilising programme, early and predrilling seedbed preparations, mulching, mechanical control and the disturbance of pest development cycles.
The natural enemies of pests and diseases should be protected and encouraged through proper habitat management of hedges, nesting sites etc.
Pest management should be regulated by understanding and disrupting the ecological needs of the pests.
An ecological equilibrium should be created to bring about a balance in the pest predator cycle.

Standards

3.2.5.1.

Products used for pest, disease and weed management, prepared at the farm from local plants, animals and micro-organisms, are allowed. If the ecosystem or the quality of organic products is likely to be jeopardised, the Procedure to Evaluate. Additional Inputs to Organic Agriculture (Appendix 3) and other relevant criteria shall be used to judge if the product is acceptable. Branded products must always be evaluated.

3.2.5.2.
Thermic weed control and physical methods for pest, disease and weed management are permitted.

3.2.5.3.
Thermic steritisation of soils to combat pests and diseases is restricted to Circumstances where a proper rotation or renewal of soil cannot take place. Permission may be given by the certification programme only on a case by case basis.

3.2.5.4.
All equipments from conventional farming systems shall be properly cleaned and free from residues before being used on organically managed areas.

3.2.5.5.
The use of synthetic herbicides, fungicides, insecticides and other pesticides is prohibited. Permitted products for plant pest and disease control is listed in Appendix 2.

3.2.5.6
The use of synthetic growth regulators and synthetic dyes are prohibited.
3.2.5.7.
The use of genetically engineered organisms or products are prohibited.

3.2.5.8
Accredited certification programmes shall ensure that measures are in place to prevent transmission of pests, parasites and infectious agents.

3.2.6 Contamination Control

General Principles

All relevant measures should be taken to minimise contamination from outside and from within the farm.

Recommendations

In case of risk or reasonable suspicion of risk of pollution, the certification programme should set limits for the maximum application levels of heavy metals and other pollutants.
Accumulation of heavy metals and other pollutants should be limited.

Standards

3.2.6.1.
In case of reasonable suspicion of contamination, the certification programme shall make sure that an analysis of the relevant products to detect the possible

sources of pollution (soil and water), shall take place to determine the level of contamination.

3.2.6.2.
For protected structure coverings, plastic mulches, fleeces, insect netting and silage rapping, only products based on polyethylene and polypropylene or other polycarbonates are allowed. These shall be removed from the soil after use and shall not be burnt on the farmland. The use of polychloride based products are prohibited

3.2.7 Soil and Water Conservation

General Principles
Soil and water resources should be handled in a sustainable manner.

Recommendations
Relevant measures should be taken to prevent erosion, salination of soil, excessive and improper use of water and the pollution of ground and surface water.

Standards
3.2.7.1.
Clearing of land through the means of burning organic matter, e.g. slash-and burn, straw burning shall be restricted to the minimum.

3.2.7.2
The clearing of primary forest is prohibited.

3.2.7.3.
Relevant measures shall be taken to prevent erosion.

3.2.7.4.
Excessive exploitation and depletion of water resources shall not be allowed.

3.2.7.5.
The certification programme shall require appropriate stocking rates which do not lead to land degradation and pollution of ground and surface water.

3.2.7.6.
Relevant measures shall be taken to prevent salination of soil and water.

3.2.8 Collection of Non Cultivated Material of Plant Origin and Honey

General Principles
The act of collection should positively contribute to the maintenance of natural areas.

Recommendations
When harvesting or gathering the products, attention should be paid to maintenance and sustainability of the ecosystem.

Standards

3.2.8.1.
Wild harvested products shall only be certified organic if derived from a stable and sustainable growing environment. Harvesting or gathering the product shall not exceed the sustainable yield of the ecosystem, or threaten the existence of plant or animal species.

3.2.8.2.
Products can only be certified organic if derived from a clearly defined collecting area, which is not exposed to prohibited substances, and which is subject to inspection.

3.2.8.3.
The collection area shall be at an appropriate distance from conventional farming, pollution and contamination.

3.2.8.4.
The operator managing the harvesting or gathering of the products shall be clearly identified and be familiar with the collecting area in question.

3.3 ANIMAL HUSBANDRY

3.3.1 Animal Husbandry Management

General Principles

Management techniques in animal husbandry should be governed by the physiological and ethological needs of the farm animals in question. This includes:

- That animals should be allowed to conduct their basic behavioural needs.
- That all management techniques, including those where production levels and speed of growth should be concerned, for the good health and welfare of the animals.

Recommendations

For welfare reasons the herd or flock size should not adversely affect the behavioural patterns of the animal.

Standards

3.3.1.1.
The certification programme shall ensure that the management of the animal environment takes into account the behavioural needs of the animals and provides for:

- Sufficient free movement
- Sufficient fresh air and natural daylight according to the needs of the animals
- Protection against excessive sunlight, temperatures, rain and wind according to the needs of the animals

- Enough lying and/or resting area according to the needs of the animal. For all animals requiring bedding, natural materials shall be provided.
- Ample access to fresh water and feed according to the needs of the animals
- Adequate facilities for expressing behavior in accordance with the biological and ethological needs of the species.

No compounds used for construction materials or production equipment shall be used which might detrimentally affect human or animal health.

3.3.1.2.
All animals shall have access to open air and/or grazing appropriate to the type of animal and season taking into account their age and condition, to be specified by the certification programme.
The certification programme shall allow exceptions in cases where:

- The specific farm or settlement structure prevents such access provided animal welfare can be guaranteed Areas where feeding of animals with carried fresh fodder is a more sustainable way to use land resources than grazing, provided animal welfare is not compromised.

Restrictions shall always include a time limit which shall be set for each exception. Poultry and rabbits shall not be kept in cages.
Landless animal husbandry systems shall not be allowed.

3.3.1.3.
When the natural day length is prolonged by artificial lighting, the certification programme shall prescribe maximum hours respective to species, geographical considerations and general health of animals.

3.3.1.4.
Herd animals shall not be kept individually.
The certification programme may allow exceptions, e.g., male animals, smallholdings, sick animals and those about to give birth.

3.3.2 Length of Conversion Period

General Principles
The establishment of organic animal husbandry requires an interim period, the conversion period.

Recommendations
The whole farm, including livestock, should be converted according to the standards set out in this document. Conversion may be accomplished over a period of time. Replacement poultry should be brought onto the holding at the start of the production cycle.

Standards
3.3.2.1.
Animal products may be sold as "product of organic agriculture" only after the farm or relevant part of it has been under conversion for at least twelve months

and provided the organic animal production standards have been met for the appropriate time.

3.3.2.2.
The certification programme shall specify the length of time by which the animal production standards shall be met. With regard to dairy and egg production, this period shall not be less than 30 days.

3.3.2.3.
Animals present on the farm at the time of conversion may be sold for organic meat if the organic standards have been followed for 12 months.

3.3.3 Brought-in Animals

General Principles

All organic animals should be born and raised in the organic holding.

Recommendations

Organic animal husbandry should not be dependent on conventional raising systems.
When trading or exchanging livestock, it should preferably take place between organic farms or as part of a long term cooperation between specific farms.

Standards

3.3.3.1.
When organic livestock is not available, the certification programme shall allow brought-in conventional animals according to the following age limits:

- 2 day old chickens for meat production
- 18 week old hens for egg production
- 2 week old for any other poultry
- piglets up to six weeks and after weaning
- calves up to 4 weeks old which have received colostrum and are fed a diet consisting mainly of full milk.

Certification programmes shall set time limits (not exceeding 5 years) for Implementation of certified organic animals from conception for each type of animal.

3.3.3.2.
Breeding stock may be brought in from conventional farms at an annual rate not exceeding 10% of the adult animals of the same species in the organic farm.
For brought-in breeding stock the certification programme shall allow a higher yearly maximum than 10% in the following cases and with specific time limits.-

- Unforeseen severe natural or man made events
- Considerable enlargement of the farm
- Establishment of a new type of animal production on the farm
- Small holdings

3.3.4 Breeds and Breeding

General Principles

Breeds should be chosen which are adapted to local conditions.
Breeding goals should not be at variance with the animal's natural behaviour and should be directed towards good health.

Recommendations

Breeding shall not include methods which make the farming system dependent on high technological and capital intensive methods.
Reproduction techniques should be natural.

Standards

3.3.4.1.
The certification programme shall ensure that breeding systems are based on breeds that can both copulate and give birth naturally.

3.3.4.2.
Artificial insemination is allowed.

3.3.4.3.
Embryo transfer techniques are not allowed in organic agriculture.

3.3.4.4.
Hormonal heat treatment and induced birth are not allowed unless applied to individual animals for medical reasons and under veterinary advice.

3.3.4.5.
The use of genetically engineered species or breeds are not allowed.

3.3.5 Mutilations

General Principles

The animals' distinctive characteristics should be respected.

Recommendations

Species shall be chosen which do not require mutilation.
Mutilations shall be allowed only in exceptional cases and shall be kept to the minimum.

Standards

3.3.5.1
Mutilations are not allowed.
The certification programme shall allow the following exceptions:

- Castrations
- Tail docking of lambs
- Dehorning
- Ringing
- Mulesing

Suffering shall be minimised and anaesthetics used where appropriate.

3.3.6 Animal Nutrition

General Principles

The livestock should be fed 100% organically grown feed of good quality.
All feed shall come from the farm itself or be produced within the region.
The diet shall be offered to the animals in a form allowing them to execute their natural feeding behaviour and digestive needs.

Recommendations

The diet should be balanced according to the nutritional needs of the animals.
Products from the organic feed processing industry shall be used.
Colouring agents shall not be used in organic livestock production.

Standards

3.3.6.1.
The certification programme shall draw up standards for feed and feed ingredients.

3.3.6.2.
The prevailing part (at least more than 50%) of the feed shall come from the farm unit itself or shall be produced in co-operation with other organic farms in the region.
The certification programme shall allow exceptions with regard to local conditions under a set of time limit for implementation.

3.3.6.3.
For the calculation purpose 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 which are themselves being reared within the farm unit and such feed may not be sold or otherwise marketed as organic (as 4.2.4).

3.3.6.4.
Where it proves impossible to obtain certain feeds from organic farming sources, the certification programme shall allow a percentage of feed consumed by farm animals to be sourced from conventional farm. The maximum percentages of such feeds are given in the following table and shall be calculated in terms of the average diet for each animal category. These maximum percentages shall be followed the whole year round:
Ruminants (dry matter intake) 15%
Non-ruminants (dry matter intake) 20%
These percentages will be reduced within 5 years to
Ruminants (dry matter) 10%
Non-ruminants (dry matter) 15%
The certification programme shall allow exceptions to these percentages, with specific time limits and conditions in the following cases:

- Unforeseen severe natural or man-made events
- Extreme climatic or weather conditions
- Areas where organic agriculture is in early stages of development

3.3.6.5.
The following products shall not be included nor added to the feed given to farm animals:

- Synthetic growth promoters or stimulants
- Synthetic appetisers
- Preservatives, except when used as a processing aid
- Artificial colouring agents
- Urea
- Farm animal by-products (e.g. abattoir waste) to ruminants
- Droppings, dung or other manure (all types of excreata) even if technologically processed
- Feed subjected to solvent (e.g. hexane), extraction (soya and rape seed meal) or the addition of other chemical agents
- Pure amino acids
- Genetically engineered organisms or products thereof

This covers both organic and conventional feeding stuffs.

3.3.6.6.
Vitamins, trace elements and supplements shall be used from natural origin when available in appropriate quantity and quality.
The certification programme shall define conditions for use of vitamins and minerals from synthesised or unnatural sources.

3.3.6.7.
All ruminants shall have daily access to roughage.

3.3.6.8.
The following fodder preservatives shall be used:

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

Synthetic chemical fodder preservatives shall be allowed in special weather conditions. The certification programme shall specify conditions for use of substances from synthesised or unnatural sources e.g. acetic, formic and propionic acid, vitamins and minerals.

3.3.6.9.
The certification programme shall set minimum weaning times taking into account the natural behaviour of the relevant animal species.

3.3.6.10.
Young stock from mammals shall be raised using systems which rely on organic milk, preferably from their own species.
In emergencies the certification programme shall allow the use of milk from no organic farming systems or dairy based milk substitutes so long as they do not contain antibiotics or synthetic additives.

3.3.7 Veterinary Medicine

General Principles

Management practices should be directed to the wellbeing of animals, achieving maximum resistance against disease and preventing infections.
Sick and injured animals shall be given prompt and adequate treatment.

Recommendations

Natural medicines and methods, including homeopathy, ayurvedic, unani medicine and acupuncture, shall be emphasised. When illness does occur the aim should be to find the cause and prevent future outbreaks by changing management practices.
Where appropriate, the certification programme should set conditions based on the farm's veterinary records to minimise the use of medicines.
The certification programme should make a list of medicines specifying the withholding periods.

Standards

3.3.7.1.
The well-being of the animals is the primary consideration in the choice of illness treatment. The use of conventional veterinary medicines are allowed when no other justifiable alternative is available.

3.3.7.2.
Where conventional veterinary medicines are used, the withholding period shall be at least double the legal period.

3.3.7.3.
Use of the following substances is prohibited :

- Synthetic growth promoters
- Substances of synthetic origin for production, stimulation or suppression of natural growth
- Hormones for heat induction and heat synchronisation unless used for an individual animal against reproductive disorders, justified by veterinary indications

3.3.7.4.
Vaccinations shall be used only when diseases are known or expected to be a problem in the region of the farm and where these diseases cannot be controlled by other management techniques. The certification programme shall define conditions for such cases.
Legally required vaccinations are allowed.
Genetically engineered vaccines are prohibited.

3.3.8 Transport and Slaughter

General Principles

Transport and slaughter should minimise stress to the animal. Transport distance and frequency should be minimised.
The transport medium should be appropriate for each animal.

Recommendations

Animals should be inspected regularly during transport.

Animals should be watered and fed during transport depending on weather conditions and duration of the transport.

Stress to the animal shall be minimised, especially taking into consideration:

- Contact (by eye, ear or smell) of each animal with dead animals or animals in the killing process
- Existing group ties
- Resting time to release stress

Each animal shall 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.

Standards

3.3.8.1.

Throughout the different steps of the process there shall be a person responsible for the well- being of the animal.

3.3.8.2

Handling during transport and slaughter shall be calm and gentle. The use of electric sticks and such instruments are prohibited.

3.3.8.3.

The certification programme shall set slaughter and transportation standards that will take into consideration:

- Stress caused to the animal and person in charge
- Fitness of the animal
- Loading and unloading
- Mixing different groups of animals or animals of different sex
- Quality and suitability of mode of transport and handling equipment
- Temperatures and relative humidity
- Hunger and thirst
- Specific needs. of each animal

3.3.8.4.

No chemical synthesised tranquillisers or stimulants shall be given prior to or during transport.

3.3.8.5.

Each animal or group of animals shall be identifiable during all steps.

3.3.8.6.

Where the transport is by axle, the journey time to the slaughterhouse shall not exceed eight hours.

Certification programmes may grant exceptions on a case to case basis.

3.3.9 Bee Keeping

General Principles

The collection area should be organic and/or wild and should be as varied as possible to fulfill the nutritional needs of the colony and contribute to good health. The feed supplied should be fully organic.
Bee keeping is considered to be part of animal husbandry. The general principles therefore also apply to bee keeping.

Recommendations

The feeding of colonies shall be seen as an exception to overcome temporary feed shortages due to climatic conditions.
The foundation comb should be made from organic wax.
When bees are grown in wild areas, consideration should be taken of the indigenous insect population.

Standards

3.3.9.1.
Hives shall be situated in organically managed fields and/or wild natural areas.
Hives shall not be placed close to fields or other areas where chemical pesticides and herbicides are used.
Exceptions can be made by certification bodies on a case to case basis.

3.3.9.2.
Feeding shall only take place after the last harvest before the season when no foraging feed is available.

3.3.9.3.
Each bee hive shall primarily consist of natural materials. Use of construction materials with potentially toxic effects are prohibited.

3.3.9.4.
Persistent materials may not be used in beehives where there is a possibility of permeation of the honey and where residues may be distributed in the area through dead bees.

3.3.9.5.
Wing clipping is not allowed

3.3.9.6.
Veterinary medicine shall not be used in bee keeping.
When working with the bees (e.g. at harvest) no repellent consisting of prohibited substances shall be used.

3.3.9.7.
For pest and disease control and for hive disinfection the following products shall be allowed:

- caustic soda
- lactic, oxalic, acetic acid
- formic acid

- sulphur
- etheric oils
- bacillus thuringiensis

3.4 FOOD PROCESSING AND HANDLING

3.4.1 General

General Principles

Any handling and processing of organic products should be optimised to maintain the quality and integrity of the product and directed towards minimising the development of pests and diseases.

Recommendations

Processing and handling of organic products should be done separately in time or place from handling and processing of non organic products.
Pollution sources shall be identified and contamination avoided.
Flavouring extracts shall be obtained from food (preferably organic) by means of physical processes.

Standards

3.4.1.1.
Organic products shall be protected from co-mingling with non-organic products.

3.4.1.2.
All products shall be adequately identified through the whole process.

3.4.1.3.
The certification programme shall set standards to prevent and control pollutants and contaminants.

3.4.1.4.
Organic and non-organic products shall not be stored and transported together except when labelled or physically separated.

3.4.1.5.
Certification programme shall regulate the means and measures to be allowed or recommended for decontamination, cleaning or disinfection of all facilities where organic products are kept, handled, processed or stored.

3.4.1.6.
Besides storage at ambient temperature, the following special conditions of storage are permitted (See Appendix 4):

- Controlled atmosphere
- Cooling
- Freezing
- Drying
- Humidity regulation

Ethylene gas is permitted for ripening.]

3.4.2 Pest and Disease Control

General Principles

Pests should be avoided by good manufacturing practices. This includes general cleanliness and hygiene.
Treatments with pest regulating agents must thus be regarded as the last resort.

Recommendations

Recommended treatments are physical barriers, sound, ultra-sound, light, and UV-light, traps (incl. pheromone traps and static bait traps), temperature control, controlled atmosphere and diatomaceous earth.
A plan for pest prevention and pest control should be developed.

Standards

3.4.2.1.
For pest management and control the following measures shall be used in order of priority:

- Preventive methods such as disruption, elimination of habitat and access to facilities
- Mechanical, physical and biological methods
- Pesticidal substances contained in the Appendices of the national standards
- Other substances used in traps

Irradiation is prohibited.

3.4.2.2.
There shall never be direct or indirect contact between organic products and prohibited substances. (e.g. pesticides). In case of doubt, it shall be ensured that no residues are present in the organic product.

3.4.2.3.
Persistent or carcinogenic pesticides and disinfectants are not permitted.
The certification programme shall set up rules to determine which protection agents and disinfectants may be used.

3.4.3 Ingredients, Additives and Processing Aids

General Principles

100% of the ingredients of agriculture origin shall be certified organic.

Recommendations

For the production of enzymes and other micro-biological products the medium shall be composed of organic ingredients.
The certification programme should take into consideration:

- The maintenance of nutritional value
- The existence or possibility of producing similar products.

Standards

3.4.3.1.
In cases where an ingredient of organic agriculture origin is not available in

sufficient quality or quantity, the certification programme may authorise use of non organic raw materials subject to periodic re-evaluation. Such non-organic raw material shall not be genetically engineered.

3.4.3.2.
The same ingredient within one product shall not be derived both from an organic and non-organic origin.

3.4.3.3.
Water and salt may be used in organic products.

3.4.3.4.
Minerals (including trace elements), vitamins and similar isolated ingredients shall not be used.
The certification programme may, grant exceptions where use is legally required or where severe dietary, or nutritional deficiency can be demonstrated.

3.4.3.5.
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.

3.4.3.6.
The use of additives and processing aids shall be restricted

3.4.4 Processing Methods

General Principles

Processing methods should be based on mechanised, physical and biological processes.
The vital quality of an organic ingredient shall be maintained throughout each step of its processing.

Recommendations

Processing methods shall be chosen to limit the number and quantity of additives and processing aids.

Standards

3.4.4.1.
The following kinds of processes are approved :

- Mechanical and physical
- Biological
- Smoking
- Extraction
- Precipitation
- Filtration

3.4.4.2.
Extraction shall only take place with water, ethanol, plant and animal oils, vinegar, carbon dioxide, nitrogen or carboxylic acids. These shall be of food

grade quality, appropriate for the purpose

3.4.4.3.
Irradiation is not allowed.

3.4.4.4.
Filtration substances shall not be made of asbestos nor may they be permeated with substances which may negatively affect the product.

3.4.5 Packaging

General Principles

Ecologically sound materials should be used for the packaging of organic products.

Recommendations

Packaging materials that affect the organic nature of the contents should be avoided.
Use of PVC materials is prohibited.
Laminates and aluminum should be avoided.
Recycling and reusable systems shall be used wherever possible.
Biodegradable packaging materials shall be used.

Standards

3.4.5.1 The materials used must not affect the organoleptic character of the product or transmit to it any substances in quantities that may be harmful to human health.

3.5 LABELLING

General Principles

Labelling shall convey clear and accurate information on the organic status of the product.

Recommendations

When the full standards requirements are fulfilled, products shall be sold as "produce of organic agriculture" or a similar description.
The name and address of the person or company legally responsible for the production or processing of the product shall be mentioned on the label.
Product labels should list processing procedures which influence the product properties in a way not immediately obvious.
Additional product information shall be made available on request. All components of additives and processing aids shall be declared.
Ingredients or products derived from wild production shall be declared as such.

Standards

3.5.1.1.
The person or company legally responsible for the production or processing of the product shall be identifiable.

3.5.1.2.
Single ingredient products may be labelled as "produce of organic agriculture" or a similar description when all Standards requirements have been met.

3.5.1.3.
Mixed products where not all ingredients, including additives, are of organic origin may be labelled in the following way (raw material weight):

- Where a minimum of 95% of the ingredients are of certified organic origin, products may be labelled "certified organic" or similar and should carry the logo of the certification programme.
- Where less than 95% but not less than 70% of the ingredients are of certified organic origin, products may not be called "organic". The word "organic" maybe 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. An indication that the product is covered by the certification programme may be used, close to the indication of proportion of organic ingredients.
- Where less than 70% of the ingredients are of certified organic origin, the indication that an ingredient is organic may appear in the ingredients list. Such product may not be called "organic".

3.5.1.4.
Added water and salt shall not be included in the percentage calculations of organic ingredients.

3.5.1.5.
The label for in-conversion products shall be clearly distinguishable from the label for organic products.

3.5.1.6.
All raw materials of a multi-ingredient product shall be listed on the product label in order of their weight percentage. It shall be apparent which raw materials 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.

3.5.1.7.
Organic products shall not be labelled as GE (genetic engineering) or GM (genetic modification) free in order to avoid potentially misleading claims about the end product. Any reference to genetic engineering on product labels shall be limited to the production method.

3.6 STORAGE & TRANSPORT

General Principles

Product integrity should be maintained during storage and transportation of organic products.

Recommendations

Organic Products must be protected at all times from co-mingling with non-organic products.

Organic products must be protected at all times from contact with materials and substances not permitted for use in organic farming and handling.

Standards

3.6.1

Where only part of the unit is certified and other products are non-organic, the organic products should be stored and handled separately to maintain their identity.

3.6.2

Bulk stores for organic product should be separate from conventional product stores and clearly labeled to that effect.

3.6.3

Storage areas and transport containers for organic product should be cleaned using methods and materials permitted in organic production. Measures should be taken to prevent possible contamination from any pesticide or other treatment

not listed in Appendix – 2.

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SECTION-5

GUIDELINES FOR CERTIFICATION OF GROWER GROUPS

5.1 SCOPE

This system shall be based on the internal quality system and shall apply to producer groups, farmer's cooperatives, contract production and small scale processing units. The producers in the group must apply similar production systems and the farms should be in geographical proximity. Farms with land holding of 4 ha and above can also belong to a group but will have to be inspected annually by the external Inspection and Certification Agency. The total area of such farms shall be less than 50% of the total area of the group.
Processors and exporters can be a part of the same group but will have to be inspected annually by the external Inspection and Certification Agency.

5.2 CONSTITUTION OF THE GROUP ORGANIZATION

The group will have a legal status or constitution of the organization and shall be presented by an organizational chart.
For implementation of the procedures to maintain the internal control system, responsibilities shall be delegated to individual members / committees for carrying out specific activities.

5.3 INTERNAL QUALITY SYSTEM (IQS)

Group certification is based on the concept of an Internal Quality System comprising of the following: -

- Implementation of the internal control system
- Internal standards
- Risk assessment.

An external inspection and certification body should be identified for conducting annual inspection of the individual group / unit. The external inspection agency shall evaluate by checking the IQS documentation, staff qualifications and re-inspecting some farms.

5.4 HOW TO DEVELOP AN IQS

The following are the minimum requirements for setting up an IQS for grower groups: -

- Development of Internal Control System (ICS)
- Identification of producer groups
- Creation of awareness about group certification
- Identification of qualified personnel for maintaining the internal control system
- Give necessary training in production and IQS development
- Preparation of IQS manual containing policies and procedures
- Implementation of the policies and procedures
- Review and improvement of the IQS document for maintaining a harmonized IQS.

5.4.1 Internal quality system manager (IQS Manager)

IQS manager shall develop and implement the IQS and would be responsible to organize internal inspections, coordinate between field staffs, approval staff, and the external inspection agency. The IQS manager shall have defined procedures to approve or sanction farmers.

The responsibility of IQS manager shall be to ensure that all the standards requirements are fully implemented by the group.

5.4.2 Internal inspectors

Adequate number of internal inspectors shall be identified from within the group. The inspectors shall be qualified and well versed with the standards to perform internal inspections.

5.4.3 Approval manager / committee

Qualified person or approval committee shall be designated from within the group to take the approval decision. The approval manager/committee shall be well versed with organic procedures of IQS, internal standards and NPOP standards.

5.4.4 Field officers

Field officers should be identified among the group, one at each production area. The field officer shall train the farmers by organizing field extension services.

5.4.5 Purchase officers

Purchase officers shall be identified who would be responsible for correct purchase of produce from the farmers. The purchase officer is required to be well versed with IQS.

5.4.6 Warehouse manager

If there are separate warehouses, it may be necessary to have a warehouse manager who would be responsible for handling the produce. He / she shall be well versed with the procedures of IQS for proper implementation

5.4.7 Processing manager

If a processing unit is operated by the IQS operator, it may be necessary to assign a processing manager. The processing manager is required to be trained in the handling procedures. When the processing of the produce is being organized in a company, the latter needs to be inspected by the certifier and would be responsible for processing according to the internal handling rules. In such case, the processing unit shall have a formal contract with the grower group.

5.5 INTERNAL STANDARDS

The internal standards shall be prepared in local language by the IQS manager for the region of operations under the framework of NPOP standards. If the

farmers are illiterate, the internal standards shall contain illustrations in the text for better understanding. The internal standards would contain: -

- Definition of production unit
- How to deal with part conversion
- Conversion period
- Farm production norms for the entire production unit (e.g. seeds, nutrient management, pest management, soil management, approved inputs, prevention of drifts, livestock husbandry management)
- Harvest and post harvest procedures

5.6 CONFLICT OF INTEREST

The IQS personnel shall not have any conflict of interest that might hinder the work. All possible conflicts shall be declared in a written statement. In such cases, the IQS shall ensure that alternative solutions are found.

5.7 SCOPE OF CERTIFICATION

The certification shall be granted to the group with reference to the regulations / standards adopted by the group.

5.8 TRADE

The group will market the products under a single entity. For trading the products from the group of producers, the IQS shall draw up relevant procedures.

5.9 PROCEDURES FOR IMPLEMENTATION OF INTERNAL CONTROL SYSTEM

For maintaining the internal control system, the following procedures shall be adopted by the grower group.

5.9.1 Registration of members

All members of the group will be formally (legally) registered under a single entity.

5.9.2 Provision of documents to the members of the grower group

Each member of the grower group will be supplied with docket in local languages, which will contain the following –

- Copy of IQS manual
- Internal standards document
- NPOP document (Each member / staff shall be communicated when there is a revision in the standards.)
- Definition of the production unit
- Farm Entrance Form (farm data sheet), including last use of prohibited inputs
- Field records (main cultivation measures, use of inputs, harvested quantities, post harvest procedures): remark: may be included in internal farm checklist.

- Prevailing farming system and package of practices available for the area
- Details and description of the various steps required for the process flow right from cultivation to harvest and sales of the products.
- Written contract (for formal commitment) of each grower within the group
- Annual farm inspection checklist
- Information on training programmes and provision of advisory services by the field officers.

5.10 OPERATING DOCUMENT

The quality manager shall prepare the operating document, which shall be followed by all the members of the group. The operating document will contain the following: -

5.10.1 An overview map (village or community map) showing location of each member's production unit. The map should indicate the crops cultivated in rotation and also mark any farm in an area, which could be identified as high risk due to drift from non-conventional farms.

5.10.2 Farmer's list with code and name of the farmer, total area, area under crop (or number of plants), date of registration with the group, date of last use of forbidden products, date of internal inspection, name of internal inspector, result of internal inspection (separate lists for in-conversion farmers)

5.10.3 List of farmers who have been issued sanctions with the reason and the duration of the sanction (if relevant).

5.10.4 The risk shall be assessed by IQS manager for the grower group every year. The risk assessment should be made at the farm level, processing, transporting and during trade. The IQS will take all measures to minimize the identified relevant risks.

5.10.4.1 Critical control points for risk assessment

- Measures taken by the farmers to deal with part conversion (if farmers still grow some non-organic crops).
- Conversion period
- Production rules for the whole production unit, e.g., seeds, fertilization and soil management, pest management, approved inputs, prevention of drifts, animal husbandry.
- Harvest and post harvest procedures.
- Processing and handling standards

5.11 INTERNAL INSPECTIONS

- At least two inspections of the group (one in growing season of each crop) shall be carried out by the internal inspector and will be documented.

- The inspection will be carried out in presence of the member or his representative and must include a visit of the whole farm, storage of inputs, harvested products, post harvest handling and animal husbandry.
- The internal inspector will also verify if the internal standards have been followed and whether the conditions of the previous internal inspection have been fulfilled.
- The visit of the internal inspector will be documented in the farm inspection checklist duly signed by the inspector and counter-signed by the member or his representative.
- In case of severe non-compliance, the results will be reported immediately to the IQS manager and all measures will be taken according to the internal sanction procedures.

5.12 EXTERNAL INSPECTIONS

The external Inspection and Certification Agency will re-inspect some of the farms for the evaluation of the grower group for efficient internal control system for compliance with the NPOP Standards.

The sampling plan for inspection shall be based on the inspector's perception of risk based on the following factors:

1. Size of holding
2. Number of the members in the group
3. Degree of similarity between the production system and crop system
4. Inter-mingling / contamination
5. Local hazards

Sampling methods for different size of the grower group shall be based on the following table given below: -

Number in the grower group (N)	Number of producers to be inspected					
	Initial audit		Reassessment		Surveillance visit	
	Number to be inspected (n= N)	% of total	Number to be inspected (n=0.8 N)	% of total	Number to be inspected (n=0.6 N)	% of total
< 25	5	20	4	16	3	12
26-50	5-7	19-14	4-6	15-12	3-4	12-8
51-100	7-10	14-10	11-8	22-8	4-6	8-6
101-250	10-16	10-6	8-13	8-5	6-10	6-4
251-500	16-22	6-4	13-18	5-4	10-13	4-3
501-750	22-27	4	18-22	4-3	13-16	3-2
751-1000	27-32	4-3	22-26	3	16-19	2
1001-1500	32-39	3	26-31	3-2	19-23	2
1501-2000	39-45	3-2	31-36	2	23-27	2-1
2001-2500	45-50	2	36-40	2	27-30	1
>2500	50	2	40	2	30	1

5.13 YIELD ESTIMATES

Yields will be estimated for each crop for individual farmer in the group. This activity should be carried out especially during harvesting and should be counter-checked with the estimates during buying.

5.14 INTERNAL APPROVALS

The IQS manager will have a defined procedure to approve or impose sanction on the farmers in the group. All internal farm checklist are screened by internal approval staff with special focus on the critical control points of risk / difficult cases.

- The approval committee for providing internal certification status will check the assessment of the internal inspector. If necessary, conditions will be set out for achieving compliance with the NPOP.
- The next competent person or committee must confirm results of the internal inspection in an approval procedure.

5.15 NON-COMPLIANCES AND SANCTIONS

In case of non-compliances, the IQS shall take corrective or mitigating measures.

- Procedures for implementation of sanctions will be defined in case of noncompliance.
- Sanctions have to be documented (list of farmers issued sanctions, documentation of identified non-conformities in the files).
- Farmers who have used prohibited inputs on their farms must undergo again the full conversion period (if they remain in the group). In such cases, it has to be checked whether the farmers have already delivered produce and whether this (now no longer certified) produce has been mingling with other produce. If this has been the case, the certification body needs to be notified immediately and the mingled produce kept separate until further instructions.

5.16 TRAINING OF IQS PERSONNEL

1. Each internal inspector will be trained annually by a competent person.
2. The date of the training, list of participants will be documented.
3. The date of participation and content of the training of all IQS staff needs to be documented in the staff files.

5.17 TRAINING OF FARMERS

The IQS manager will organize regular training to the farmers in the group: -

1. Each farmer needs to receive at least one initial advisory visit by the extension service or in a organized training.
2. The list of participants and content of the training needs to be documented.

5.18 BUYING PROCEDURES

To ensure genuineness of the products from the group, the following minimum requirements should be followed during buying: -

1. The status of the farmer in the group should be checked.
2. The supplied amount should be compared with the harvested amount and estimated yield. In case of doubt, the produce is kept apart until clarified by the IQS Coordinator.
3. The delivered quantity of the product will be registered in the purchase record
4. Farmer will be issued a receipt duly signed by the purchase officer stating the quantities of the product delivered with date.
5. All documents have to indicate the status of the certified product (organic or in-conversion).

6. Bags should be labeled as 'organic' or as 'in-conversion'.

5.19 STORAGE AND HANDLING PROCEDURES

The purchase or the warehouse manager during the handling of produce shall check the document to ensure the compliance with the NPOP standards. The following are the minimum requirement that will be followed during storage and handling: -

- Identification of the product at all stages of product flow during transition.
- Segregation of organic products from in-conversion products.
- Fumigation of containers, irradiation / ionization, etc. are prohibited.
- The location in the warehouse during storage must be labeled as 'organic' or 'in-conversion'.

5.20 PROCESSING

During the handling of the produce, the documentation must be checked for compliance with the NPOP standards.

- Central Processing Units will be inspected by the external inspection and certification body.
- Ingredients and processing aids must be used as defined in Annexe-4 and 5 of Section-3 of NPOP standards.
- During the product flow (transition), the products should be separated from non organic products.
- The processing steps will be documented.

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