



# Pacific Organic Standard



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The potential for organic agriculture to contribute to the sustainable development of our Pacific Island nations is highly significant. The organics movement in the Pacific has been driven from the grassroots – by non-governmental organisations, farmer organisations and dedicated individual farmers who have recognised this potential and sought to move the industry forward.

With the assistance and support of the Secretariat of the Pacific Community (SPC) and funding through the International Fund for Agricultural Development (IFAD), these groups have now worked together in a multi-stakeholder partnership with government agencies, the private sector, and the International Federation of Organic Agriculture Movements (IFOAM) to develop our first Pacific Regional Organic Standard.

The holistic approach to development promoted by the organic movement addresses many key areas of concern for our island nations: economic development; environmental protection; improved health; and opportunities for our smallholder farmers to link into global export markets.

It is especially noteworthy that the Standard encompasses such pressing issues for the Pacific region as climate change, and recognition of culture, traditional practice and social justice. This makes it a truly Pacific document and one of which we can be proud.

The Pacific Organic Standard will serve as a strong marketing tool for promoting organic produce within the Pacific, facilitating local and regional marketing, and also for promoting Pacific products to the world. The Standard provides a benchmark for organic agricultural practice in our region and represents a significant milestone in the development of the region's organic enterprises.

As Chairperson of the Pacific High Level Organics Group, I commend the Pacific Region Organic Standard to all those involved in the organics industry and all other interested parties and I look forward to continuing to contribute to the growth of this dynamic industry.



**Honourable Tuilaepa Sailele Malielegaoi**  
**Prime Minister of Samoa**  
**(Chairperson, Pacific High Level Organics Group)**

## The Pacific organic story

In the Pacific region, organic production is both traditional and new. It is traditional in the sense that the majority of producers to this day use tried and tested practices handed down from generation to generation that are generally in harmony with the environment and with modern organic principles. And it is new in that Pacific countries and territories are starting to understand the benefits of certification for obtaining access to external markets, and the need for research and training to develop the sector and generate much needed livelihoods for their people.

The Pacific is facing a number of region-wide challenges, including the effects of climate change, degradation of ecosystems due to unsustainable use of both land and marine resources, and the need to generate livelihoods to maintain populations in the islands. Increased consumption of imported, highly refined foods, accompanied by decreased local food production and consumption, is also having serious effects on the health of island populations. The recent escalation in food prices can be added to the list. There is little doubt that promoting organic agriculture can contribute to answering some of these challenges.

Organic agriculture is growing rapidly, with almost 31 million hectares of land certified as organic worldwide. Not only are producers increasingly aware of the need to produce sustainably, there is also ever increasing demand from consumers for organic products and huge potential in terms of market opportunities.

Given these opportunities, and the natural fit between Pacific cultural philosophies and organic philosophies, this Standard is the result of a concerted effort by the Regional Organic Task Force, which has brought together participants from a range of backgrounds from 10 Pacific Island countries and territories, Australia and New Zealand. The Standard aims to provide a vehicle for organic production, as a sector, to raise its sails and conquer the Pacific. It encompasses accepted world-wide organic principles and at the same time holds true to the unique cultures, traditions and physical and geographic circumstances of the diverse peoples, ecosystems and natural resources that make up Oceania.

We would like to express our sincere gratitude to the International Fund for Agricultural Development, the International Federation of Organic Agriculture Movements, Agribusiness NZ, the Regional Organic Task Force and to all those who contributed to the realisation of this Standard. May it set the stage for opening up new opportunities for producers and consumers alike, and contribute to increased awareness of the Pacific as a player in global organic production.

**'Aleki Sisifa**  
**Director of Land Resources Division**  
**Secretariat of the Pacific Community**



## A basis for developing the organic sector

The Pacific Organic Standard was developed under a project financed by the International Fund for Agricultural Development (IFAD) and implemented by the International Federation of Organic Agriculture Movements (IFOAM) in cooperation with the Secretariat of the Pacific Community (SPC) and the Regional Organic Task Force.

IFOAM encourages the development of organic standards that are adapted to local cultures and ecosystems and that reflect the organic vision and needs of their future users. Yet IFOAM recognises that the multiplicity of private and public organic standards and technical regulations governing organic production and certification have placed a burden on producers and created barriers to trade on many levels. This is why IFOAM promotes harmonisation of organic standards at the international level, but also views geographical regions as a particularly appropriate level for adopting public standards and regulations.

The Pacific Organic Standard is the third regional organic standard produced worldwide, after the EU regulation 2092/91 and the East African Organic Products Standard. The provisions of the Standard take into account both local agricultural traditions and the two global organic standards, IFOAM IBS and Codex Alimentarius. Thus, Pacific stakeholders have true ownership of their regional standard, while at the same time, it is consistent with existing international standards. This consistency will facilitate future negotiations in the context of export market development.

The Pacific Organic Standard covers organic production and processing and is appropriate for the unique social, cultural, environmental and agricultural conditions of Pacific Island countries and territories. The Standard does not cover conformity assessment procedures, and hence leaves the door open for local stakeholders to develop their own, locally appropriate organic guarantee systems for serving local, national and regional markets.

The development of this Standard has included an intensive regional consultation process. Feedback from these consultations, and technical comparisons with international organic standards, informed the work of the Regional Organic Task Force – a highly successful public-private sector partnership comprising representatives of national organic movements, government bodies, organic businesses and regional NGOs.

The Pacific Organic Standard is expected to serve as a basis for raising the profile of organic agriculture among farmers and consumers, strengthening organic production capacity in the region, and promoting further development of local, regional and international markets for Pacific organic agriculture products.

**Anne Boor**  
**International Projects Manager**  
**International Federation of**  
**Organic Agriculture Movements**



## Supporting capacity development

The International Fund for Agriculture Development (IFAD) was established as an international financial institution in 1977 as one of the major outcomes of the 1974 World Food Conference. Its main purpose is to finance agricultural development projects primarily for food production in developing countries. In supporting the development of the Pacific Organic Standard, IFAD hopes to contribute substantially to both food production and market development for sustainable livelihoods in the region.

IFAD has funded two interlinked projects to promote organic production in the region. The first of these projects, *Building capacities on certification of organic agriculture in the Pacific*, was implemented by IFOAM, the international organics body, in collaboration with Women in Business Development Inc., a Samoan organisation striving to achieve sustainable development of rural villages through utilising the products of the local environment.

The second project, implemented by SPC, *Development of regional organic standards and a strategy for organic agriculture in Pacific island countries and territories*, is aimed at developing a mechanism to foster collaboration between organic sector stakeholders within the region and internationally. The project will support the on-going development of regional organic certification standards through locally owned processes and will also facilitate development of a regional strategy and national plans for sustainable organic agriculture enterprises.

The latter project has involved the promotion of organic production on both political and technical levels. The Pacific High Level Organics Group was formed to support the development of policies facilitating organic agriculture in the Pacific region, while the Regional Organic Task Force was the technical body charged with developing this Standard. The end result has been a true public-private partnership. Input from national organic associations, governments and the private sector has ensured that regional stakeholders can truly claim ownership of the Pacific Organic Standard.

**Asia & The Pacific Division  
Programme Management Department  
International Fund for  
Agriculture Development**



The first Pacific Regional Organic Standard is the result of the collaborative efforts of many.

In particular, the following are gratefully acknowledged for their valuable contributions to the development of the Standard:

**Regional Organic Task Force:**

- ◆ Bio Fenua, French Polynesia
- ◆ Department of Agriculture and Food, Tonga
- ◆ Equilibres – sustainable development consultancy, New Caledonia
- ◆ Fiji Organic Association, Fiji
- ◆ Kastom Gaden Association, Solomon Islands
- ◆ Land Resources Division, SPC
- ◆ Ministry for Agriculture, Vanuatu
- ◆ Ministry of Agriculture and Fisheries, Samoa
- ◆ Ministry of Environment, Lands and Agricultural Development, Kiribati
- ◆ Niue Organic Farmers Association, Niue
- ◆ PNG Coffee Growers Federation, Papua New Guinea
- ◆ School of Agriculture, The University of the South Pacific
- ◆ Titikaveka Growers Association, Cook Islands
- ◆ Tonga National Youth Congress, Tonga
- ◆ Women in Business Development Inc., Samoa

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- ◆ SPC

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- ◆ National Association for Sustainable Agriculture Australia (NASAA)
- ◆ Staff of SPC
- ◆ Pacific High Level Organics Group



# PACIFIC ORGANIC STANDARD

## 1.1 THE PACIFIC CONTEXT

### People and places

The Pacific Islands region is characterised by island nations with small populations scattered across an ocean area of approximately 30 million square kilometres. Less than 2% of this area is land. The region has a total population of around 9.5 million people.

The 22 countries and territories of the Pacific include a mixture of continental islands, volcanic islands and low and raised coral atolls. These countries and territories have traditionally been divided into three groups – Melanesia (west), Polynesia (southeast) and Micronesia (north).

The countries of Melanesia – Papua New Guinea, Fiji, New Caledonia, Solomon Islands and Vanuatu – are the largest of the Pacific Island countries, with over 90% of the land mass and 85% of the population. The islands in this group are relatively large and predominantly mountainous, but all of these countries have atoll islands. They have fertile soils and much higher levels of natural resources than other Pacific Islands, including exploitable mineral wealth. The economies of Papua New Guinea, Solomon Islands and Vanuatu are mainly based on agriculture, with a high proportion of the population engaged in subsistence agriculture. Fiji and New Caledonia both support commercially focused agriculture, but subsistence agriculture is also an important activity.

The Polynesian countries of Samoa, Tonga and French Polynesia are considerably smaller than the Melanesian countries, but have relatively strong economies. Samoa consists of two large islands and a number of smaller ones, with the two main islands being 'high' islands of volcanic origin with fertile soils. Tonga is a much larger archipelago with a mixture of atoll and 'high' islands. Both have generally agricultural economies and cash cropping for export is important. Their economies also benefit significantly from remittances from expatriate family members living in the USA, Canada, Australia and New Zealand.

Micronesia includes the predominantly atoll countries and territories of the Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Guam, Kiribati, Marshall Islands, Nauru and Palau. Along with the smaller Polynesian countries and territories of American Samoa, Cook Islands, Niue, Pitcairn Islands, Tokelau, Tuvalu, and Wallis and Futuna, these islands – all classified as small island states – have small land areas, but vary from single islands to archipelagos spread over enormous areas of ocean. They have mainly sandy soils with limited fertility able to support a restricted range of vegetation. Some grow specialised export crops and others have developing tourism industries, but all of their economies depend to some extent on expatriate remittances and many rely on external aid. Many of these countries and territories are vulnerable to water shortages and water contamination, sea level rise, coastal erosion and increasingly regular natural disasters.

Based on present trends, the total population of the Pacific Islands is predicted to increase by 50% by 2030. Most of this increase will occur in Melanesia, while the population of some islands will continue to fall, largely as a result of emigration. Nearly all the countries and territories of the Pacific

are experiencing increasing rural to urban drift and governments are seeking to reverse this trend through policies for improving rural infrastructure and promoting employment opportunities in agriculture.

### **Issues**

The islands that make up the Pacific are geographically and culturally diverse both within and across nations, a characteristic of the Pacific region that plays an important role in shaping livelihood choices. Recognition of this diversity is fundamental to any approach that seeks to support the livelihoods of Pacific people. But despite differences in their environments and cultures, Pacific islands share many common challenges.

Most have limited natural resources and fragile environments that are vulnerable to natural disasters. Many islands are particularly at risk in the face of the predicted effects of climate change, with some low-lying atolls expected to be underwater in the future.

The economies of the region tend to be uncertain and slow growing, and domestic markets are small and poorly integrated. In addition, international markets are often difficult to access because of high freight costs due to the remoteness of many islands. A feature of most island economies is considerable dependence on the public sector and limited private sector development, which in some countries contributes to increased social and political instability.

Farming is predominantly small scale, low in productivity and based mainly on family labour with limited adoption of modern technology. Produce is mainly consumed on farm, although some is marketed. Root crops, such as taro, yams and cassava, are the main staple, along with coconuts, breadfruit and bananas.

Typical constraints faced by agricultural producers in the region include difficulties in obtaining good-quality planting material, lack of efficient pest control and monitoring programmes, high post-harvest losses and inadequate agro-processing facilities. In relation to livestock, poor animal health, the high cost of feed and poorly developed domestic and export markets are also constraints.

In contrast to the picture for agriculture, the region has substantial marine resources, with fish providing an important source of food and revenue. There is also considerable potential for inshore aquaculture. New Caledonia and French Polynesia have significant aquaculture enterprises. Fiji also has some commercial activity. In other islands, aquaculture is as yet mostly in the early stages of development, though several ventures are being initiated.

While acknowledging these constraints, there is growing awareness in the region that appropriate investment and action are urgently required to ensure food security and the sustainability of resources. Agriculture has a critical role to play in meeting these objectives in terms of both production and trade, and governments are beginning to address the present constraints to agricultural development by implementing strategies to increase productivity and food self-sufficiency, and reduce dependence on food imports. These strategies include developing human capacity, diversifying production, improving marketing and export performance, and using agricultural initiatives to improve the quality of life of poor and vulnerable groups.

## Organic farming

Organic farming has the potential to play a huge role in addressing many of the issues facing Pacific Island countries and territories. To facilitate its development in the region, SPC is coordinating the development and implementation of the Pacific Organic Regional Development Strategy. The vision of this strategy is:

*Pacific organics – the key contributor to sustaining our cultures and improving farmer livelihoods, communities, people’s health and the environment in the Pacific*

It is anticipated that implementation of the strategy will assist in the development of organics in the Pacific and contribute to improvements in:

- ◆ local and regional food security;
- ◆ farmer livelihoods, by enabling farmers to trade, with access to both domestic and export markets, and by reducing their dependence on expensive, imported production inputs;
- ◆ human health, by providing better access to high-quality, clean and nutritious food;
- ◆ the environment, by encouraging the use of environmentally friendly management practices;
- ◆ the well-being of people and communities, by promoting the adoption of ethical labour and social justice principles.

Organic production is acknowledged as having the potential to contribute strongly to the return of the Pacific to a region of peace and plenty. It is hoped that the benefits associated with the development of organics in the Pacific will be recognised by government and development agencies, which are welcome to use this standard as a reference for their initiatives.

## 1.2 SCOPE OF PACIFIC ORGANIC STANDARD

The Pacific Organic Standard describes the requirements for organic production. It covers plant production, animal husbandry, beekeeping, collection of wild products and aquaculture, and also the processing and labelling of products derived from these activities. This standard provides a mechanism to define the expectations for organic production. When complied with, it also enables producers to label their products as organic. The standard does not cover procedures for verification, such as inspection or certification of products.

The aims of this standard are:

- ◆ to ensure that sustainable production systems are developed and maintained
- ◆ to protect consumers against deception and fraud in the marketplace and against unsubstantiated claims
- ◆ to protect producers of organic produce against misrepresentation of other agricultural produce as organic
- ◆ to ensure that all stages of production, processing, storage, transport and marketing are subject to inspection and comply with this standard
- ◆ to assist in informing consumers about the character of organic production in the Pacific

## **Pacific organic principles**

Organic agriculture, whether in farming, processing, distribution or consumption, is aimed at sustaining and enhancing the health of ecosystems and organisms, from the smallest living entity in the soil to human beings. It is guided by the following principles:

- ◆ **Health** – organic agriculture sustains and enhances the health of the soil, which enables the production of healthy plants and animals to enhance the lives of people and their environment, as one and indivisible.
- ◆ **Ecology** – organic agriculture is based on living ecological systems and cycles, works with them, emulates them and helps to sustain them.
- ◆ **Fairness** – organic agriculture builds on relationships that ensure fairness with regard to the common environment and life opportunities. The key role of farmers and rural communities are recognised and benefits shared equitably with them.
- ◆ **Care** – organic agriculture is managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.
- ◆ **Culture and traditions** – Pacific organic agriculture recognises the value of contributions from traditional agriculture and Pacific cultures.

The aims of Pacific organic agriculture are:

- 1) to produce optimal quantities of food and fibre compatible with human and environmental needs, thus addressing food security risks, reducing reliance on imported inputs, and lessening the impact of negative external economic events;
- 2) to produce food of high nutritional value that will help address local human health issues;
- 3) to work within natural systems in ways that enhance those systems, thus enabling effective management of pests, diseases, weeds and other risks to production;
- 4) to maintain and increase the long-term productivity of soil, that is, to stop land degradation and erosion;
- 5) to promote wise use of land, water and vegetation and minimise the off-farm effects of agriculture on aquatic and terrestrial systems;
- 6) to foster local and regional production and distribution;
- 7) to use renewable resources as much as possible;
- 8) to maintain and increase the long-term fertility and biological activity of soils using locally adapted cultural, biological and mechanical methods as opposed to relying on inputs;
- 9) to maintain and encourage agricultural and natural biodiversity on the farm and surrounding areas through sustainable production systems and protection of plant and wildlife habitats;
- 10) to provide balanced nutrients, optimise opportunities to cycle nutrients within the farm, and recycle nutrients and energy that leave the farm or other farms in food and fibre products that are not consumed (that is, organic waste containing energy and nutrients), with the aim of feeding the soil ecosystem;
- 11) to provide livestock with conditions that satisfy their behavioural and physiological needs;
- 12) to maintain, or increase as appropriate, the genetic diversity of

- domesticated and native plants, animals and other organisms on the farm (this precludes the use of genetic engineering techniques);
- 13) to ensure that everyone involved in organic production has a quality of life that covers their basic needs and that they receive adequate return and satisfaction from their work, including a safe working environment and protection from the negative impacts of chemicals;
  - 14) to progress towards an entire organic production chain, which is both socially just and ecologically responsible, and in which farmers are treated fairly and equitably;
  - 15) to recognise the importance of, and protect and learn from, indigenous knowledge and traditional farming systems;
  - 16) to mitigate the adverse impacts of farming in relation to climate change and provide strategies for adapting production systems to the effects of climate change;
  - 17) to protect the region from the introduction of genetically modified organisms by providing a viable alternative to the use of inputs and practices based on genetic engineering techniques.

### 1.3 NORMATIVE REFERENCES

This Pacific Organic Standard incorporates provisions from other publications. Undated references refer to the latest edition of the following publications:

- ◆ IFOAM – Basic standards for organic production and processing. Version 2005.
- ◆ CAC/GL 32, Codex Alimentarius – Guidelines for the production, processing, labelling, and marketing of organically produced foods.

It should be noted that compliance with all relevant national and regional regulations takes precedence over the requirements of these organic standards.

### 1.4 TERMS AND DEFINITIONS

For the purposes of this standard, the following definitions apply:

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

**Agroforestry:** Combines agriculture and forestry techniques to create more permanent, integrated, diverse, productive, profitable, healthy and sustainable land-use systems designed to mimic the structure and function of natural systems.

**Annual plant:** Plant that completes its life cycle (from seed to seed) within a single growing season.

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

**Biodiversity:** Natural variety and variability of life forms and their environment; it includes genetic diversity (diversity within and among species), species diversity (number and variety of species), and ecosystem diversity (total number of ecosystem types).

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

**Broad-acre farming:** Type of farming that uses extensive parcels of land to produce crops and/or graze livestock on a large scale.

**Buffer zone:** Clearly defined and identifiable boundary area bordering an organic production site and adjacent areas; a buffer zone is established to avoid contact with substances that must not be used according to this standard.

**Cage:** Enclosure made of mesh, bars or wire, used to confine or contain an animal.

**Certification:** Procedure by which a third party gives written assurance that a clearly identified process has been methodically assessed, such that there can be adequate confidence that specified products conform to specified requirements.

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

**Certification mark:** Sign, symbol or logo of a certification body that identifies product(s) as being certified according to the rules of a programme operated by that body.

**Certification programme:** System operated by a certification body with its own rules, procedures and management practices for carrying out certification of conformity.

**Child:** Young person under a specific age according to the national legislation of the state she/he lives in. In cases involving employment in hazardous sectors, *child* denotes a person under the age of 18 years.

**Child labour:** Any employment that interferes with the legal rights of a child and his/her culturally appropriate educational needs.

**Contamination:** Pollution of organic product or land or contact with any material that would render a product unsuitable for organic production or for being represented as an organic product.

**Conventional:** Any material, production or processing practice that is not organic or organic 'in-conversion'.

**Conversion period:** Duration of time from the start of organic management until crops and animal products qualify as organic.

**Crop rotation:** Practice of alternating the species or families of annual and/or biennial crops grown in a field in a pattern or sequence so as to break weed, pest and disease cycles and maintain or improve soil fertility and organic matter content.

**Direct source organism:** 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.

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

**Extended family:** Core functional family unit in the Pacific; it includes blood relatives, and relatives by marriage and adoption, extending to grandparents, aunts, uncles and cousins.

**Farm:** Total area of land under the control of one farmer or collective of farmers, including all related farming activities or enterprises.

**Farm unit:** Subset of a farm holding, including parcels of land or blocks or other subdivision.

**Food additive:** Substance added to a processed product, for technological reasons, that becomes a component of the final product and/or affects its characteristics.

**Food fortification:** Addition of one or more essential nutrients to a food, whether or not the nutrient is normally contained in the food, for the purpose of preventing or correcting a demonstrated deficiency of one or more nutrients in the population or specific population groups.

**Genetic engineering:** Set of techniques used in molecular biology by which the genetic material of plants, animals, microorganisms, cells and other biological units are altered in ways, or with results, that could not be obtained by methods of natural mating and reproduction or natural recombination. Techniques used in genetic modification include, but are not limited to, creation of recombinant DNA, cell fusion, micro and macro injection, encapsulation, and gene deletion and doubling. Genetically engineered organisms do not include organisms that result from techniques such as conjugation, transduction and natural hybridisation.

**Genetically modified organism (GMO):** Plant, animal or microbe that has been transformed using genetic engineering techniques.

**Genetic resources:** Genetic material of actual or potential value.

**Greenhouse gases:** Gases that increase the temperature of the earth's surface. They include water vapour, tropospheric ozone, chlorofluorocarbons, carbon dioxide, carbon monoxide, methane and nitrous oxide.

**Green manure:** Crop that is incorporated into the soil to improve it. Green manure may include spontaneous crops, plants or weeds.

**Habitat:** Area in which a plant or animal species naturally exists, or the area where a species occurs. The term is also used to indicate specific types of areas, e.g. seashore, riverbank, woodland and grassland.

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

**In-conversion:** Crop that is grown both organically and non-organically (conventional or in-conversion production) on the same farm.

**Ingredient:** Any substance, including a food additive, used in the manufacture or preparation of food and non-food products and present in the final product (although possibly in a modified form).

**Ionising radiation:** Processing of food products by gamma rays, X-rays or accelerated electrons to destroy or inactivate organisms that cause spoilage and decomposition; the process is used for the purpose of controlling microbial contaminants, pathogens, parasites and pests in food, preserving food or inhibiting physiological processes such as sprouting or ripening.

**Label:** Any written, printed or graphic information that is attached to a product, accompanies the product or is displayed near the product.

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

**Natural fibre:** Non-synthetic filament of plant or animal origin.

**Operator:** Individual or organisation responsible for ensuring that the production system and resulting products meet this standard.

**Organic:** Refers to the farming system and products described in this standard. Organic does not refer to organic chemistry.

**Organic agriculture:** Farming system that complies with this standard.

**Organic management plan:** Plan developed and documented by operators that identifies how they will maintain the integrity of their operation in accordance with this standard; the plan also includes a map or floor plan of the production or processing unit.

**Organic product:** Product that has been produced, processed and handled in compliance with this standard.

**Organic seed and planting material:** Seed and planting material that is produced by organic agriculture.

**Parallel production:** Any production system in which the same unit is growing, breeding, handling or processing the same products using both organic and non-organic methods. A system that includes organic and in-conversion production of the same product is also termed parallel production.

**Perennial:** Plant that lives more than two years.

**Pest:** Insect, rodent, nematode, fungus, weed or other form of terrestrial or aquatic animal or plant life that is injurious to health or the environment.

**Polyculture:** Intensive growing of two or more crops either simultaneously or in sequence on the same piece of land.

**Primary ecosystem:** Forest or other habitat that has not been subject to any past human-induced disturbance, such as logging or burning.

**Processing aid:** Any substance (not including apparatus or utensils), not consumed as a food itself, that is used in the processing of raw materials, foods, or ingredients to achieve a technical purpose during treatment or processing and that may result in the presence of residues or derivatives in the final product.

**Propagation:** Reproduction of plants either sexually (i.e. through seed) or asexually (i.e. through cuttings, root division).

**Sanitise:** Treat produce or food-contact surfaces by a process that is effective in destroying or substantially reducing the numbers of vegetative cells of microorganisms of public health concern, and other undesirable microorganisms; the treatment must not adversely affect the product or its safety for the consumer.

**Shall:** In this standard, denotes a required state or action.

**Should:** In this standard, denotes a recommended, desirable or expected state or action.

**Synthetic:** Manufactured using chemical and industrial processes. Includes products not found in nature or simulation of products from natural sources (but not extracted from natural raw materials).

**Synthetic pesticide:** Synthetic product intended to prevent, eliminate or control a pest.

**Taboo:** Prohibition that excludes something from use, approach or mention because of its sacred and inviolable nature.

**Traceability:** Ability to follow the movement of a food through specified stage(s) of production, processing and distribution.

**Traditional agriculture:** Indigenous form of ecologically based agriculture.

## 1.5 ACRONYMS AND ABBREVIATIONS

IFAD – International Fund for Agricultural Development

IFOAM – International Federation of Organic Agriculture Movements

ILO – International Labour Organization

ROTC – Regional Organic Task Force

SPC – Secretariat of the Pacific Community

SPREP – Secretariat of the Pacific Regional Environment Programme

USP – University of the South Pacific



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GENERAL REQUIREMENTS FOR  
ORGANIC PRODUCTION



## 2.1 ECOSYSTEM MANAGEMENT

### Outline and general principle

Agriculture in the Pacific is undertaken in a diverse range of environments and landscapes that host a high level of biodiversity. However, many Pacific Island ecosystems are vulnerable and are under pressure from increasing population and higher levels of pollution. Traditional farming and fishing practices, many based on a mixture of agriculture and forestry, acted to protect and enhance biodiversity as a basis for stimulating the overall performance of a farm or marine environment. These practices also protected less tangible intrinsic values, reflecting the intimate relationship between people, land and sea. Contemporary regional strategies, such as the Pacific Plan, have now been developed to protect the environment and its biodiversity. Pacific organic farming will incorporate these strategies to ensure that organic farming systems can be tailored to different locations and that appropriate approaches to farm management, such as the use of polyculture production systems, are practised to protect and enhance the quality of the environment, ecosystems and biodiversity.

### Standard

- 2.1.1 Operators shall take measures to identify, maintain, protect and enhance biodiversity, which includes maintaining a significant portion of their farms to protect landscape and biodiversity values.
- 2.1.2 Primary ecosystems shall not be cleared or altered. If this has occurred recently (i.e. since the establishment of this standard) then this shall restrict access to certification. An exemption to this requirement may be considered where development is associated with agroforestry enhancement, e.g. supplementary planting of trees in a primary ecosystem.

Appropriate areas of a farm should be designated as wildlife refuge habitats. For broad-acre properties of over 5 hectares, a minimum of 5% of the certified area should be reserved as wildlife refuges unless the property is following a traditional polyculture or agroforestry approach.

Options for creating wildlife refuges include:

- ◆ creating natural boundaries such as hedges, paths and ditches – these can act as important wildlife corridors through agricultural land, help to maintain a diverse ecology, and provide a habitat for beneficial animals, birds and insects and shelter for livestock;
- ◆ maintaining areas that are not under rotation and are not heavily manured, such as extensive pastures, orchards, hedges, edges between agriculture and forest land, groups of trees and/or bushes, and forest and woodland;
- ◆ maintaining waterways, pools, springs, ditches, floodplains, wetlands, swamps and other water-rich areas that are not used for intensive agriculture or aquaculture production.

- 2.1.3 The operator shall take measures to limit the incursion of preventable pests, diseases and weeds on to the property.

## 2.2 SOIL AND WATER CONSERVATION

### Outline and general principle

The Pacific Island region includes many different landscapes with a wide range of climates, soil types, slope and land uses, resulting in different risks to soil quality and quantity. Traditional farmers developed a wide range of locally appropriate strategies to sustainably manage their soil reserves and ensure that they could obtain a sustainable supply of food. Some of these practices, such as slash and burn cultivation, are now discouraged due to their impact on soil quality and biodiversity, and with the introduction of a broader range of organic practices they are no longer required.

Many islands have very limited water resources, often located as a thin lens under the island. Harvesting of rainwater is an important source of water, though not always a reliable one. Traditions evolved to protect these water resources from overuse and contamination. However, on many islands there is increasing pressure on water resources as a result of higher population, intensification of production, and events such as sea level rise.

The approach of this standard to soil and water conservation is to use traditional practices alongside organic farming methods to conserve and build up soil, maintain water quality and ensure water is efficiently and responsibly used. This approach will help ensure the protection of soil resources, and water quality and quantity at the catchment level. It will also contribute to the protection of sensitive downstream coastal aquatic ecosystems, such as mangroves and coral reefs.

### Standard

2.2.1 The protection and enhancement of soil resources is an integral part of organic farming. Operators shall minimise loss of topsoil and prevent erosion by taking measures that are appropriate to local climatic conditions and soil, slope and land use.

Examples of these practices include:

- ◆ maintaining adequate soil plant cover
- ◆ establishing trees and windbreaks
- ◆ returning plant materials to the soil, e.g. by atoll pit farming or composting
- ◆ cultivating steep slopes appropriately or deciding not to cultivate them
- ◆ using minimum tillage, multi-cropping systems
- ◆ using ground cover mulches

2.2.2 Land preparation by burning shall be restricted and only permitted where it is part of an unbroken traditional farming system, e.g. for the control of invasive species, and then only under strict controls so as to protect soil (topsoil and humus) and biodiversity. This does not restrict the use of cooking fires or controlled fires for pest control.

2.2.3 Crop production, processing and handling systems shall return soil nutrients, organic matter and other resources removed through harvesting back to the soil by means of recycling, regeneration, and addition of organic materials and nutrients.

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

- 2.2.5 Relevant measures shall be taken to prevent or remedy soil and water salinisation.
- 2.2.6 Operators shall not deplete or excessively exploit water resources, and shall take action to preserve water quality. Where possible, they shall recycle rainwater and monitor water extraction.

To demonstrate action in this area, operators can prepare an Organic Management Plan that identifies potential impacts on water resources and describes how negative impacts can be mitigated. These impacts may include risks to water quality associated with:

- ◆ application of manures and soluble fertilisers
- ◆ animal stocking densities
- ◆ use of effluent from processing and handling facilities

- 2.2.7 Operators shall apply water and inputs in a way that does not pollute water sources through runoff to surface water or leaching into ground water.
- 2.2.8 Operators shall use techniques that conserve water.

Examples of practices include:

- ◆ increasing the organic matter content of soil through mulching and maintaining ground covers
- ◆ selecting crops adapted to the conditions, e.g. drought-tolerant plants
- ◆ timing the planting of crops to periods of reliable rainfall
- ◆ designing and operating irrigation systems to ensure the efficient use of water
- ◆ designing and using techniques tailored to specific site conditions, e.g. land contouring

- 2.2.9 Organic processors and handlers shall, where relevant, install systems that permit the responsible use and recycling of water without causing pollution or contamination either by chemicals, or by animal or human pathogens.

A water recycling system may not be required when processing is on a very small scale, e.g. processing fibre by soaking it in seawater, as is done when producing some traditional woven items.

## 2.3 GENETIC ENGINEERING

### Outline and general principle

Pacific Island countries and territories have a range of regulatory approaches to the use of genetically modified organisms. Some countries, e.g. Samoa, ban their use, while others permit limited use. Pacific organic stakeholders strongly support the exclusion of genetic engineering techniques from organic production and processing.

### **Standard**

- 2.3.1 The use of genetically engineered organisms and their derivatives including animals, seed, propagation material and farm inputs, such as fertilisers, soil conditioners, vaccines or crop materials, is prohibited in organic production and processing. Contamination of organic products by genetically modified organisms (GMOs) will mean a loss of certification.
- 2.3.2 Organic processed products shall not use ingredients, additives or processing aids derived from GMOs.
- 2.3.3 Inputs, processing aids and ingredients shall be traced back one step in the biological chain to the direct source organism (see definition) from which they are produced to verify that they are not derived from GMOs.
- 2.3.4 On farms with split production (including parallel production), the use of GMOs is not permitted in any production activity on the farm.

## **2.4 WILD-HARVESTED PRODUCTS AND COMMON/PUBLIC LAND MANAGEMENT**

### **Outline and general principle**

In some islands of the Pacific, wild or common places including marine and freshwater areas have been traditionally important as a source of food and fibre. There are a wide range of tenure/ownership models in place. Generally, a high proportion of land and some aquatic areas are still under customary ownership. The management of resources in these areas is typically subject to local controls and oversight that have developed to protect the resources located there as well as the broader integrity of these sites. These traditional approaches to the sustainable management of products harvested from common or wild land align well with organic management principles, which aim to sustain and prevent degradation of common biotic and abiotic resources, including areas used for rangeland, fisheries, forests, and forage for bees, and neighbouring land, air, and water. The Pacific Organic Standard reflects this fusion of organic and Pacific approaches.

### **Standard**

- 2.4.1 Wild-harvested products shall only be certified organic if they are derived from a stable and sustainable growing environment. The people who harvest/gather (or any other people) shall not take any products at a rate that exceeds the sustainable yield of the ecosystem or threatens the existence of plant, fungal, micro-organism or animal species (including marine species), including those not directly exploited. The methods used for harvesting shall also not impact on the sustainability of the targeted product.
- 2.4.2 Operators shall harvest products only from a clearly defined area where prohibited substances (those not listed in Appendix 1 – Tables 1 and 2) have not been applied for at least 3 years prior to harvest.
- 2.4.3 The collection or harvest areas shall be at an appropriate distance from conventional farming areas, and potential sources of pollution and contamination. The size of buffer zones between wild and conventional farming areas shall depend on the character of the potential risks and the products harvested as well as on local conditions.

- 2.4.4 Only organisms that live their whole life exclusively in the wild/common area can obtain organic certification.
- 2.4.5 The wild harvest area must not be grazed by conventional livestock unless the livestock conform to the quarantine and other relevant requirements of Section 5 of this standard.
- 2.4.6 The operator who manages the harvesting or gathering of products from wild/common resources shall be familiar with the defined collecting or harvesting area.
- 2.4.7 Operators shall identify any appropriate authority that may have a landholding right, governance or oversight role over the area and obtain permission to access the area and undertake any harvesting or gathering. They shall work with a positive intent with these authorities and where appropriate provide payments for harvesting/access rights.
- 2.4.8 Operators shall identify any regulations and traditional rules/controls/taboo that have been established that relate to the access, management and harvesting/gathering activity in the area and comply with these.
- 2.4.9 Operators shall take measures to ensure that wild, sedentary aquatic species are collected only from areas where the water is not contaminated by substances prohibited in these standards.

## 2.5 MITIGATING THE EFFECTS OF CLIMATE CHANGE

### Outline and general principle

The potential effects of climate change pose a serious threat to the region and place significant pressure on local farming systems. Although Pacific islands produce very small amounts of greenhouse gases, in some cases they may be among the countries most affected by climate change, with whole islands under threat from sea-level rise. Organic farming has significant potential to avoid or reduce the production of greenhouse gases through the following mechanisms:

- ◆ Lower use of fossil fuels – organic farming does not use energy-demanding synthetic fertilisers as it focuses on maintaining soil fertility through the use of internal farm inputs.
- ◆ Reduction in the production of nitrous oxides – organic farming does not use synthetic nitrogen fertiliser.
- ◆ Reduction in methane production by promoting soil aerobic micro-organisms and high levels of soil biological activity.

In addition, organic practices encourage the sequestration of carbon by:

- ◆ maintaining tight nutrient and energy cycles through organic management of soils;
- ◆ systematic recycling of organic waste, often by means of composting;
- ◆ encouraging agroforestry farming systems;
- ◆ protecting soil from erosion and associated loss of soil organic matter.

The adoption of these and other practices will assist in addressing factors that may contribute to climate change.

Organic farming also provides strategies that will assist farmers to adapt to the potential impacts of climate change, e.g. by establishing agroforestry systems that:

- ◆ lessen the impacts of wind, e.g. through providing shelter for land, farms and people;
- ◆ are drought resistant and support the conservation of water resources;
- ◆ are tolerant of higher temperatures and fluctuations in temperature.

### **Standard**

- 2.5.1 The use of renewable forms of energy, e.g. wind and solar power, shall be considered for meeting the energy supply requirements of organic farms, processing units and other activities.
- 2.5.2 Operators shall identify sources of greenhouse gas emissions from their farming operations and aim to minimise these where practical. In ruminant production systems, active efforts shall be made to offset methane emissions.

Strategies to offset methane emissions could include:

- ◆ planting trees
- ◆ enhancing levels of soil organic matter through appropriate pasture management.

- 2.5.3 In selecting crops and animals, their suitability for dealing with and adapting to climate change effects shall be considered.

An example is the planting of drought-resistant and salt-tolerant plant varieties such as Pandanus species, especially in atoll countries and coastal environments.

- 2.5.4 In recognition of the energy inputs and greenhouse gas emissions associated with the production of resources used in the production and processing of organic products, operators shall reduce, recycle or reuse resources used in producing and processing organic products to increase the efficiency of resource use.



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GENERAL REQUIREMENTS FOR  
CROP PRODUCTION AND  
ANIMAL HUSBANDRY



### 3.1 CONVERSION REQUIREMENTS

#### Outline and general principle

Organic agriculture develops viable and sustainable agro-ecosystems by using methods that are compatible with natural living systems and cycles. In some areas of the Pacific, traditional farming practices that have evolved over a long period of time are still being used and these align well with organic principles. However, in many other areas, farms will need to enter a conversion period to align them with organic practices.

#### Standard

- 3.1.1 There shall be a period of at least 12 months organic management for annuals and at least 18 months for perennials that meets all the requirements of these standards before the resulting product can be considered organic. An exemption to this requirement may be approved where there is a verifiable record of the unbroken use of traditional practices with no inclusion of non-permitted inputs or activities.
- 3.1.2 For certified organic production, the start of the conversion period shall be calculated from the date of application to the certification body. For non-certified production, the start of the conversion period shall be calculated from the time that organic management started and that the last use of non-permitted substances occurred.
- 3.1.3. A period of at least 3 years must elapse since the last application of non-permitted inputs before full certification status can be attained.

### 3.2 SPLIT AND PARALLEL PRODUCTION

#### General principle

The whole farm, including livestock, is converted to organic management practices, according to the standard, over a period of time. Many Pacific farms are very small and it is considered impractical to carry out split or parallel production on these farms.

#### Standard

- 3.2.1 Split production – if the whole farm is not converted, the organic, in-conversion and conventional parts of the farm shall be clearly and continuously separated. Properties under 4 hectares are not permitted to have split production and are permitted to have only one level of organic certification status. An exemption to this requirement may be permitted to allow for the continued ownership and management of non-organic animals on a property, if these are for the operator's own use.
- 3.2.2 Parallel production – simultaneous production of the same organic and non-organic crops or animal products can be a useful process to build experience and confidence in the conversion process. However, it will only be permitted where such production is undertaken in a way that allows clear and continuous separation of all products claimed to be certifiable as organic. All cases of this production shall be documented.

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

### **3.3 MAINTENANCE OF ORGANIC MANAGEMENT**

#### **General principle**

Organic production systems require an ongoing commitment to the use of effective organic production practices.

#### **Standard**

- 3.3.1 Land converted to organic production shall not be alternated (switched back and forth) between organic and conventional production.



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CROP PRODUCTION



## 4.1 CHOICE OF CROPS AND VARIETIES

### Outline and general principle

Pacific farmers have a long tradition of selecting and growing crops that are adapted to local conditions and needs, including the management of climatic and other risks. This is reflected in the large number and variety of internationally important crops that are grown by Pacific farmers, including taro, coconut, yam, sweet potato, banana and cassava. Traditional practices align well with optimal modern organic practices and are supported by regional plant breeding programmes and other programmes provided by regional agencies.

### Standard

- 4.1.1 Seeds and planting materials shall be propagated under organic management for one generation in the case of annuals, and for two growing periods, or 12 months, for perennials, whichever is longer, before being certified as organic seed and planting material.
- 4.1.2 Operators shall use organic seed and planting material of appropriate varieties and quality. The following exemption will apply until 2013: if organic seeds, seedlings and planting materials are not commercially available, then conventional seed (not chemically treated), seedlings and planting material may be used. Seeds treated with chemicals shall be used only as a last resort and shall be cleaned of any chemicals before they are brought on to the property.

## 4.2 LENGTH OF CONVERSION PERIOD (PLANT PRODUCTION)

### General principle

A conversion period enables the establishment of an organic management system and the build-up of soil fertility.

### Standard

- 4.2.1 Plant products from annual production 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 is required.
- 4.2.2 There shall be at least a 12-month conversion period before pastures, meadows and products harvested from them can be considered organic.
- 4.2.3 The conversion period may be extended depending on past land use, management capacity of the operator and environmental factors.

## 4.3 DIVERSITY IN CROP PRODUCTION

### Outline and general principle

Traditional agriculture in the Pacific is characterised by the broad use of polyculture production systems in which a diverse range and variety

of crops are grown. These systems are often multi-storied and, based on many years experience, have evolved to become sustainable and resilient under local conditions. In some locations, e.g. atoll countries, there are limited soil reserves and specialised management practices have evolved to enhance and protect soil. These traditional practices align well with organic management principles, which recognise soil and soil management as the foundation for organic growing systems. These systems emphasise care of the soil and surrounding ecosystems to provide support for a diversity of species. They also encourage nutrient cycling and the mitigation of soil and nutrient losses. The use of polyculture production systems is encouraged to create diversity in plant production. Organic farming in the Pacific will actively contribute to national and regional biodiversity and goals for conservation of genetic resources, such as those defined in various strategies for biodiversity conservation.

### **Standard**

- 4.3.1 Operators shall manage pressure from insects, weeds, diseases and other pests while maintaining or increasing soil organic matter, fertility, microbial activity and general soil health. For annual crops, intercropping, companion planting or crop rotation shall be practised
- 4.3.2 For perennial crops that are grown as monocultures, other plants shall be intercropped; where this is not possible, other means of securing diversity shall be applied.

Organic farmers are encouraged to help conserve native plant species and varieties. Many of these plants are well adapted to organic production.

## **4.4 SOIL FERTILITY AND FERTILISATION**

### **General principle**

Organic farming includes returning microbial, plant or animal material to the soil to increase or at least maintain soil fertility and biological activity. The need to maintain optimal levels of fertility to strengthen the health of plants and enhance their resistance to pests and disease is well recognised. Examples of practices to enhance soil fertility include:

- ◆ planting green manure crops such as *Mucuna* spp., *Arachis pintoi* and *Desmodium*;
- ◆ using animal manure; however, this should be composted rather than being applied directly to plants;
- ◆ growing tree legumes such as gliricidia or calliandra in fallow fields and planting climbing beans in taro fields;
- ◆ applying locally sourced fertiliser inputs, such as wood ash and seaweed, to sustain the soil – isolated areas are especially dependent on this practice.

**Standard**

- 4.4.1 Material of microbial, plant or animal origin shall form the basis of the fertility programme.
- 4.4.2 Nutrients and fertility products shall be applied in a way that protects the soil, water and biodiversity. Brought-in manures shall be composted and only applied at rates that do not cause negative environmental impacts.

If fertilisers are used, small and regular applications are recommended, rather than infrequent applications of large amounts of fertilisers.

- 4.4.3 Material applied to the land or crop shall be in accordance with Appendix 1, Table 1.
- 4.4.4 Manures containing human excrement (faeces and urine) are prohibited for use on crops for human consumption.
- 4.4.5 Mineral fertilisers shall only be used in a programme to address long-term soil fertility needs together with other techniques such as addition of organic matter, green manures, rotations and nitrogen-fixing plants, e.g. legumes. Fertilisers of mineral origin shall be applied in the form in which they naturally exist and are extracted. They shall not be rendered more soluble by chemical treatment, other than the addition of water.

**4.5 PEST, DISEASE AND WEED MANAGEMENT****Outline and general principle**

Traditionally, Pacific farmers used a wide range of strategies to manage pest, disease and weed risks. Most of these traditional practices align well with organic principles. They include the use of:

- ◆ crops and varieties well-adapted to the environment;
- ◆ a balanced fertility programme to maintain fertile soils with high biological activity;
- ◆ locally adapted crop rotations;
- ◆ companion planting and green manure crops.

Examples of specific practices common throughout the Pacific include the use of wood ash to treat cut planting materials such as yam tubers to discourage fungal rot, hand-harvesting of plants affected by pest and disease, and hand-weeding. These and other recognised organic practices, as described in this standard, are encouraged to support the growth and development of crops in a natural manner. SPC and USP are continuing to refine these methods, e.g. by developing predator enhancement strategies.

**Standard**

- 4.5.1 Physical, cultural and biological methods may be used for pest management, e.g. use of pate (*Coleus blumei*) underplanting for the control of armyworm in taro.
- 4.5.2 Pest management products that are prepared at the farm from local plants, animals and micro-organisms are permitted only when the measures in 4.5.1 are not sufficient. If the ecosystem or the quality of the organic products might be jeopardised, the inputs listed in

Appendix 1, Table 2, may be used. However, their use is restricted and they can only be applied if there is a risk of serious loss of production or product quality. The ingredients used, including non-active ingredients such as carriers and wetting agents, must not be known carcinogens, teratogens, mutagens or neurotoxins. Wetting agents shall be from natural sources.

- 4.5.3 Physical methods for pest, disease and weed management are permitted. Heat can only be used if no other method is effective.

As an example – in the production of ginger – instead of using steam/flames, the use of bacteria or specialist plants for the removal of nematodes prior to planting should be investigated.

## 4.6 AVOIDING CONTAMINATION

### Outline and general principle

Many Pacific countries have a relatively low level of general environmental contamination due to their isolation and lack of industrial activity. There are, however, significant contamination risks and issues in some areas resulting from high population densities and historical activity coupled with often fragile environments. New sources of contamination, often the result of global sources of pollution, are an emerging problem, e.g. increased CO<sub>2</sub> emissions with their associated impact on climate. Pacific organic production must take all relevant measures to ensure that organic soil and food are protected from contamination and to minimise broader environmental impacts.

### Standard

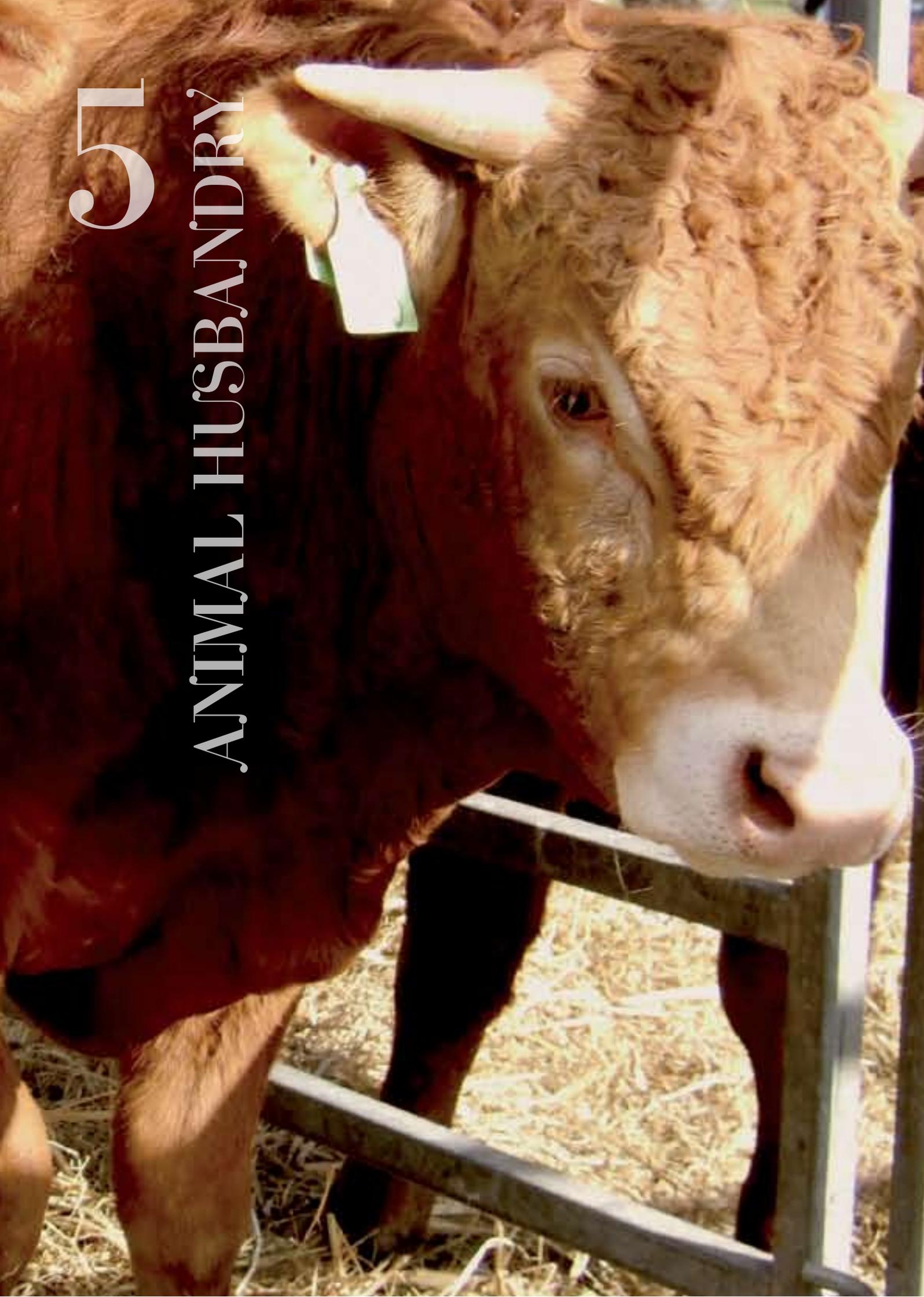
- 4.6.1 It is the operator's responsibility to use all measures possible to avoid potential contamination and limit contaminants in organic products. These measures include establishing barriers and buffer zones and advising neighbours of the area's organic status.
- 4.6.2 In case of reasonable suspicion of contamination, tests shall be conducted to establish contamination levels. Organic product samples must not contain chemical residues that exceed 10% of the maximum limit for such residues where historical contamination is present (based on national, regional or Codex chemical residue standards).
- 4.6.3 For synthetic coverings such as 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 burnt.
- 4.6.4 All equipment from conventional farming systems shall be thoroughly cleaned of potentially contaminating materials before being used on organically managed areas.

Regulatory enforcement: When an organic property or product is subject to contamination by a prohibited input as a result of a regulatory biosecurity or other enforcement programme, the certification status of the farm and product will be reviewed. However, this will not necessarily result in the loss of certification. The organic producer should actively liaise with the regulatory agency to identify alternative enforcement strategies to minimise contamination.



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ANIMAL HUSBANDRY



## 5.1 ANIMAL MANAGEMENT

### Outline and general principle

Pacific farmers have long raised pigs and chickens, while other animals are also important in some regions. Animals are an essential component of the mixed farming systems found throughout the region. They have cultural value, and also contribute to food security and soil fertility. A wider range of animals are now being farmed in the Pacific and this standard has been designed to incorporate the best approaches from traditional experience and organic principles. The adoption of this standard will ensure that livestock husbandry is based on maintaining a harmonious relationship between land, plants and livestock, with minimum disruption to ecosystems. It will also ensure that the physiological and behavioural needs of livestock are respected and the animals are fed good-quality organically grown feedstuffs.

### Scope

This livestock standard covers livestock and livestock products from the following: cows and cattle; pigs; sheep and goats; deer; poultry; crocodiles; and bees.

### Standard

- 5.1.1 Operators shall practise methods of animal management that reduce stress, promote animal health and welfare, prevent disease and parasitism, and avoid the use of chemical allopathic veterinary drugs.
- 5.1.2 Animals shall be kept in accordance with good animal husbandry practices, with access to sufficient fresh air and enough clean water and nutritious feed to satisfy their needs. Animals shall have access to protection from sunlight, excessive noise, heat, rain, mud and wind to reduce stress and ensure their well-being.
- 5.1.3 If animals are housed they shall have:
- ◆ sufficient space to stand naturally, lie down easily, turn around, groom themselves and assume all natural postures and movements, such as stretching or wing flapping;
  - ◆ adequate fresh, natural bedding materials for animals that require bedding, and pens that are kept clean;
  - ◆ enclosures that are constructed so as to ensure adequate insulation, heating, cooling and ventilation, and that enable dust levels, temperature, relative humidity and gas concentrations to be kept within levels that are not harmful to livestock;
  - ◆ capacity to maintain social structures, e.g. by ensuring that herd animals are not kept in isolation from other animals of the same species;
  - ◆ enclosures, and any associated production equipment, that are constructed of materials that do not harm human or animal health.
- 5.1.4 Poultry, rabbits and pigs shall not be kept in cages.
- 5.1.5 Landless animal husbandry systems are prohibited and all animals shall have access to pasture or an open-air exercise area or run, whenever the physiological condition of the animal, the weather and the state of the ground permit. Animals may be fed with harvested fresh fodder where this is a more sustainable way to use land resources than grazing.

- 5.1.6 The number of animals carried in an area and the flock/herd size must be limited to enable them to freely exhibit their natural behaviour and to ensure that there is no damage to soil and water resources. For pigs – housing areas for pigs over 40 kg shall be a minimum area of 1.1 m<sup>2</sup> per animal, for breeding pigs 3.0 m<sup>2</sup> per animal, and for piglets 0.6 m<sup>2</sup>. For poultry – the housing area for poultry older than 28 days shall be larger than 0.1 m<sup>2</sup> per bird. The stocking density of livestock kept on pasture, grassland, or other natural or semi-natural habitats, must be low enough to prevent degradation of the soil and over-grazing of vegetation.
- 5.1.7 Animals must be well treated and free from pain, injury or disease. Animals shall be inspected regularly and any apparent ill-health or injury shall be quickly treated. Animals shall be protected from predation by wild, feral and domestic animals such as dogs. Tethering may be practised, provided that it does not affect the well-being of the animal and sufficient food and water are available. The method of tethering shall enable the animal to move freely within the grazing area without getting entangled or choked. The tethering shall not cause wounds or other physical harm to animals.
- 5.1.8 Waterways and water catchment areas shall be protected from damage by animals, e.g. pig rooting and pollution from animal effluent and associated waste.
- 5.1.9 In the case of laying hens, when natural day length is prolonged by artificial light, the total length of the lighted period shall be no more than 16 hours a day.

## 5.2 LENGTH OF CONVERSION PERIOD

### Outline and general principle

The establishment of organic animal husbandry requires an interim period, the conversion period, unless the requirements, as set out in 3.1.1, are complied with for traditional systems. Animal husbandry systems that are changed from conventional to organic production require a conversion period to develop natural behaviour, immunity and metabolic functions.

### Standard

- 5.2.1 Livestock and their products can hold no greater status (whether in conversion or organic) than is currently held by the production unit itself. Where a production unit is converted, the rules as outlined in 3.1 and 4.2 must be complied with.
- 5.2.2 Where existing animals are converted to organic status on an organic property they shall undergo a one-time minimum conversion period according to the following schedule:
- ◆ For animals for milk production – 90 days
  - ◆ For poultry for egg production – 42 days

Note that except for the above situation, only conventionally raised animals, as specified in 5.3.1, can be brought in and that any other livestock cannot be converted to organic status even after the above conversion periods.

### 5.3 SOURCE OR ORIGIN OF ANIMALS

#### Standard

5.3.1 Animals shall be raised organically from birth. However, if such animals are not available, conventional animals may be brought in before they reach the following maximum ages:

- ◆ 2-day-old chickens for meat production;
- ◆ 18-week-old hens for egg production;
- ◆ 2 weeks for any other poultry;
- ◆ Piglets up to 6 weeks and after weaning;
- ◆ Dairy calves, deer, sheep and goats – animals up to 4 weeks old that have received colostrum and have been fed a diet consisting mainly of full milk.

Livestock that do not comply with the above conditions can never be converted to organic status.

5.3.2 Breeding stock may be brought in from conventional farms only to a yearly maximum of 10% unless the following occur:

- ◆ Unforeseen severe natural or man-made events, e.g. droughts, cyclones;
- ◆ Considerable enlargement of the farm;
- ◆ Establishment of a new type of animal production on the farm;
- ◆ Holdings have less than 10 animals.

Animals brought in from non-organic sources, and their products, may be converted to organic status only within the minimum time frames set out in 5.3.1.

### 5.4 BREEDS AND BREEDING

#### Outline and general principle

Pacific livestock farmers traditionally selected livestock that were adapted to local conditions and management systems. This resulted in a great diversity of breeds, e.g. pig breeds, and aligns well with organic livestock breeding principles.

#### Standard

- 5.4.1 Breeding systems shall be based on breeds that can breed naturally without human involvement.
- 5.4.2 Artificial insemination is permitted.
- 5.4.3 Embryo transfer techniques and cloning are prohibited.
- 5.4.4 The use of hormones to induce ovulation and birth is prohibited.

### 5.5 SURGICAL TREATMENTS

#### Outline and general principle

Traditionally, livestock were treated with great care because of their relative rarity, and cultural and intrinsic values. This aligns well with organic farming principles, which respect the welfare of animals and encourage the selection of species and breeds that do not require any sort of mutilation.

## **Standard**

- 5.5.1 The use of routine surgical treatment for animals is prohibited and may only be used for reasons of safety, to ease suffering, and to sustain the health and welfare of the animal. In such situations, the following treatments are permitted:
- ◆ Branding, earmarking or tagging
  - ◆ Putting rings in pigs' noses
  - ◆ Castration
  - ◆ De-horning and de-tusking (only of young animals less than 6-months old)

## **5.6 ANIMAL NUTRITION**

### **Outline and general principle**

Under traditional management, livestock were tightly integrated into the overall farm management system. They obtained a balanced diet of good quality feed from the farm, which was sometimes supplemented with feed from associated activities, e.g. fishing. These practices align well with organic principles for animal nutrition in that organic animals should be fed a balanced diet of good quality organic feed that meets all their nutritional needs.

## **Standard**

- 5.6.1 Animals shall be fed a balanced diet that provides all of their nutritional needs, with all ruminants having daily access to roughage. Feed is to be made up of 100% organic feedstuffs. Where organic feed of sufficient quantity or quality is not available, the daily maximum percentage of non-organic feed shall be 10% for ruminants and 15% for non-ruminants based on annual dry matter consumed.
- 5.6.2 Over 50% of feed shall come from the farm itself or be produced in co-operation with other organic farms. The use of appropriate by-products from the organic food processing industry is encouraged.
- 5.6.3 For the calculation of feeding allowances only, feed produced on the farm unit during the first year of organic management may be classed as organic. This refers only to feed for animals that are being produced within the farm unit. Such feed may not be sold or otherwise marketed as organic.
- 5.6.4 The following substances are prohibited from use as feed:
- ◆ For ruminants, farm animal by-products (e.g. abattoir waste);
  - ◆ Slaughter products of the same species;
  - ◆ All types of excrement, including droppings or other manure;
  - ◆ Feed subjected to solvent extraction (e.g. hexane) or the addition of other chemical agents;
  - ◆ Synthetic amino acids and amino-acid isolates;
  - ◆ Urea and other synthetic nitrogen compounds;
  - ◆ Synthetic growth promoters or stimulants;
  - ◆ Synthetic appetisers;
  - ◆ Preservatives, except when used as a processing aid;
  - ◆ Artificial colouring agents.
- 5.6.5 Animals may be fed vitamins, trace elements and supplements from natural sources. Synthetic vitamins, minerals and supplements may be used where natural sources are of insufficient quantity or quality;

this use will be assessed on a case by case basis.

- 5.6.6 Only the following feed preservatives can be used:
- a. Bacteria, fungi and enzymes (including effective micro-organisms);
  - b. Food industry by-products (e.g. molasses);
  - c. Plant-based products.
- 5.6.7 Young mammalian livestock shall receive colostrum for a minimum of 3 days after birth. They shall receive organic natural milk from their own species until they reach the weight at which they should normally be weaned from their mothers. Exceptions can be made in emergency cases only, and only in agreement with the certifier.

## 5.7 DISEASE PREVENTION AND VETERINARY MEDICINE

### Outline and general principle

Under traditional management, a wide range of preventive strategies were developed by Pacific farmers to protect the health of their animals. This included the use of herbs such as ‘mile a minute’ (*Mikania micrantha*), vaivai (*Leucaena leucocephala*), lupus and papaya to treat disorders such as internal parasites, birthing difficulties and other ailments. Many of these practices align well with organic management practices, which promote and maintain the health and well-being of animals through balanced organic nutrition, stress-free living conditions and selection of breeds resistant to diseases, parasites and infections.

### Standard

- 5.7.1 The operator shall take all practical measures to ensure the health and well-being of animals through using preventive animal husbandry practices. These include:
- ◆ selection of appropriate breeds or strains of animals;
  - ◆ adoption of 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 defences of the animal to stimulate natural immunity and tolerance to diseases;
  - ◆ provision of good quality organic feed;
  - ◆ appropriate stocking densities;
  - ◆ grazing rotation and management.
- 5.7.2 If an animal becomes sick or injured despite preventive measures, it shall be treated promptly. The initial use of natural, herbal or homeopathic products or practices is recommended in preference to the use of chemically synthesised veterinary products. Producers shall not withhold medication where it will result in unnecessary suffering for livestock, even if the use of such medication will cause the animal to lose its organic status. An operator may use synthetic veterinary drugs or antibiotics only if:
- a. preventive and alternative practices are unlikely to be effective in treating sickness or injury;
  - b. the drugs are used under the supervision of a veterinarian or other suitably qualified supervisor; and
  - c. withholding periods are not less than double those required by

national legislation or where this is not available – as established by other neighbouring countries legislation, e.g. Australia, New Zealand, or a minimum of 48 hours, whichever is longer.

All treatments with synthetic veterinary drugs shall be documented.

5.7.3 The use of synthetic growth promotants or suppressants is prohibited.

5.7.4 Vaccinations are permitted in cases 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
- ◆ a vaccination is legally required; and
- ◆ the vaccine is not genetically engineered.

## 5.8 TRANSPORT AND SLAUGHTER

### Outline and general principle

In the Pacific, under traditional management, the slaughter of livestock was typically undertaken by the farmer as the need arose or sometimes as part of a cultural event. Animals were typically not transported far for this process for which a range of techniques were used. This standard recognises the traditional norms and aligns these with the organic principle that animals are subjected to minimum stress during transport and slaughter. The latter should include consideration of the specific needs of each animal and the quality and suitability of the mode of transport and handling equipment.

### Standard

5.8.1 Animals shall be handled calmly and gently during transport and slaughter. The transport and slaughter of animals shall comply with all relevant national and regional regulations.

5.8.2 During the process of transportation and slaughter, organic animals shall be provided with conditions that reduce, and minimise the potentially adverse effects, of:

- ◆ stress;
- ◆ loading and unloading;
- ◆ mixing different groups of animals or animals of different sex;
- ◆ temperature and relative humidity; and
- ◆ hunger and thirst.

5.8.3 Animals shall not be treated with synthetic tranquilisers or stimulants prior to, or during transport. The use of electric prods and other such instruments is prohibited.

5.8.4 Slaughter shall be carried out quickly and without causing undue stress to the animal. Each animal shall be stunned before being bled to death. Slaughter by bleeding, without stunning, is not permitted unless it is done to meet cultural or religious requirements and the practice is carried out in an appropriate and calm environment.

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

5.8.6 Slaughterhouse journey times shall not exceed eight hours. Exceptions to this requirement include cases where:

- ◆ there is no certified organic abattoir within eight hours drive;

- ◆ there is no abattoir capable of satisfying national or importing country requirements within eight hours drive.

## 5.9 BEEKEEPING

### Outline and general principle

Beekeeping has only recently been adopted by some Pacific farmers. However, it complements and supports Pacific farming systems through promoting pollination and enabling honey production. Organic beekeeping has significant potential, especially because of the disease-free status of many countries, and will be managed to ensure that it does not significantly disrupt indigenous insect populations or the pollination requirements of native plants.

### Standard

#### Conversion

- 5.9.1 Bee colonies may be converted to organic production. Introduced bees shall come from organic production units when available or otherwise from traditional beekeeping. The conversion period for a colony is at least one year.
- 5.9.2 If the wax is contaminated with pesticides, it shall be replaced by organic wax at the start of the conversion period.
- 5.9.3 The selection of the breed and type of bee to be used will take into account suitability for local conditions and prevalent diseases.

#### Location and construction of hives

- 5.9.4 Hives shall be situated in organically managed fields and/or wild natural areas. Hives shall be placed in an area that ensures access to sufficient sources of water, honeydew, nectar and pollen to supply all of the bees' nutritional needs.
- 5.9.5 The operator shall not place hives within foraging distance of fields or other areas with an identified contamination risk from prohibited substances. If a potential contamination risk is located within 3 km of the apiary site, regular testing of the honey to ensure that it is not contaminated shall be required.
- 5.9.6 Hives shall be made of materials that present no risk of toxicity for the bees or products produced by the bees.

#### Feeding

- 5.9.7 At the end of the production season, hives shall be left with sufficient reserves of honey and pollen to enable the colony to survive the wet season.
- 5.9.8 Supplementary feeding is permitted only when the survival of the colony is at risk due to adverse weather conditions. Any supplementary feeding shall be carried out only between the last honey harvest and the start of the next nectar or honeydew flow period. In such cases, organic honey or sugar shall be used where available. The use of conventional sugar is only permitted under exceptional cases and then only until 2013.

## Husbandry

- 5.9.9 The health and welfare of the hive shall be primarily managed by maintaining strong healthy bee colonies and applying good preventive management practices, such as;
- ◆ using appropriate, hardy breeds;
  - ◆ maintaining high standards of hygiene;
  - ◆ regularly inspecting hives and manipulating conditions as appropriate.
- 5.9.10 Where preventative measures fail, veterinary medicinal products may be used provided that their use is documented, and:
- ◆ preference is given to phytotherapeutic and homeopathic treatment; and
  - ◆ when allopathic, chemically synthesised medicinal products are used, the bee products are not sold as organic;
  - ◆ treated hives are placed in isolation and undergo a conversion period of one year.
- 5.9.11 The following inputs are permitted for pest and disease control:
- ◆ lactic, formic, oxalic and acetic acid;
  - ◆ sulfur;
  - ◆ natural essential oils (e.g. menthol, eucalyptol, camphor, citronella);
  - ◆ *Bacillus thuringiensis*.
  - ◆ Steam, direct flame and caustic soda, sodium hypochlorite (bleach) and sodium bicarbonate (baking soda) may be used for hive disinfection with appropriate post-treatment cleaning.
- 5.9.12 Veterinary treatments that are compulsory under national or regional legislation are authorised; however, their use may affect the certification status of the animal or property.
- 5.9.13 The destruction of bees in combs as a method of harvesting bee products is prohibited.
- 5.9.14 Clipping of the wings of queen bees is prohibited.
- 5.9.15 Artificial insemination of queen bees is permitted.
- 5.9.16 The use of synthetic bee repellents is prohibited during honey extraction operations.
- 5.9.17 The use of smoke shall be kept to a minimum. Smoking materials shall be natural or made from materials that meet the requirements of these standards.



# 6

## AQUACULTURE PRODUCTION STANDARDS



## 6.1 CONVERSION TO ORGANIC AQUACULTURE

### Outline and general principle

Foods from the sea and from freshwater sources have always been a very important component of the traditional diet of most Pacific Island people. A wide range of governance, management and harvesting techniques have been developed to protect these food sources, e.g. establishment of community conservation areas that allow for the protection and sustainable management of marine resources. Pacific organic aquaculture links these traditional approaches with modern aquaculture management techniques to enable the production of a wide range of animal and plant marine products. These products may include freshwater trout, freshwater prawns, shellfish, marine shrimp, carp, tilapia, milk fish, sea cucumber and crocodiles, as well as seaweed and pearls. Organic aquaculture requires:

- ◆ high quality water
- ◆ sound management practices
- ◆ appropriate stocking rates
- ◆ consideration of animal welfare
- ◆ use of approved inputs only

### Scope

Aquaculture covered in this standard includes the farming of many different species using diverse forms of production in fresh, brackish or salt water. This standard covers aquatic plants, fish, and carnivorous, omnivorous, and herbivorous organisms of all types and at all stages of growth, produced in a variety of enclosures such as earthen ponds, tanks and cages (open and closed systems). Wild, stationary organisms in open collecting areas are covered. However, this standard excludes organisms that move freely in open waters, and/or cannot be inspected according to the general procedures for organic production.

### Standard

- 6.1.1 Operators must comply with this standard throughout the conversion period and with all relevant requirements of Section 3 (General Requirements), Section 5 (Animal Husbandry) for fish/invertebrates, and Section 4 (Crop Production) for aquatic plants.
- 6.1.2 The conversion period shall be at least 12 months or one life cycle of the organism, whichever is shorter. Where the entire production unit is not converted, then individual sections of the unit must fully comply with these production standards before they can be certified as organic. Conventional production areas must be physically separated from converting areas and clearly identifiable.
- 6.1.3 The conversion period must take into account the life cycles, species, environmental factors and past use of the site with respect to waste, sediments and water quality, and may be extended to address these issues.
- 6.1.4 No conversion period is required for the collection of wild, sedentary organisms where the water is free-flowing and not contaminated by substances prohibited in this standard and where all other relevant sections of this standard are complied with.

## 6.2 AQUATIC ECOSYSTEMS

### General principle

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

### Standard

- 6.2.1 Aquatic ecosystems shall be managed to comply with the relevant requirements of Section 2 (General Requirements for Organic Production).
- 6.2.2 Operators shall take adequate measures to prevent escapes of introduced or cultivated species and document any escapes that are known to occur. Regional and other invasive aquatic species management guidelines (e.g. those disseminated by SPREP) must be complied with.
- 6.2.3 Operators shall take verifiable and effective measures to minimise the release of nutrients and waste, including those resulting from soil erosion, into aquatic ecosystems.
- 6.2.4 Fertilisers and pesticides are prohibited, except for those listed in Appendix 1.
- 6.2.5 Harvest of aquatic plants shall not disrupt the ecosystem or degrade the collection area or the surrounding aquatic and terrestrial environment.

## 6.3 BREEDS AND BREEDING

### General principle

Animals farmed in organic aquaculture systems begin life in organic units. They are adapted to local conditions and natural methods are used for breeding. Organic aquaculture systems are not dependent on conventional raising systems.

### Standard

- 6.3.1 Animals shall be raised organically from birth. When organic stock is not available, conventional sources may be used. However, breeding stock brought in from conventional sources shall spend not less than two-thirds of their life span in the organic system. The following conversion periods apply:
  - ◆ 9 months in the case of 3-year-old fish produced for food, or at least three-quarters of their lifetime.
  - ◆ 6 months in the case of juvenile fish less than 2 years old.
  - ◆ 10 weeks for the production of fingerlings brought in before they weigh 20 grams.
  - ◆ 12 months in the case of fish raised for caviar production.The use of non-organic sources of animals will be reviewed in 2012 and operators should develop organic sources before then.
- 6.3.2 Operators shall not use artificially polyploid or genetically engineered organisms.

## 6.4 AQUATIC ANIMAL NUTRITION

### Outline and general principle

The nutritional needs of organic aquatic animals are met from good quality, organic and wild marine sources of feed. Pacific organic aquaculture will be characterised by the development of sustainable systems that operate with minimal reliance on additional feed inputs and that work in harmony with the wider environment.

### Standard

- 6.4.1 To meet their nutritional needs, animals shall be fed rations from plants and animals appropriate for the digestive system, metabolism and physiological needs of their species. Animals shall be fed 100% organic feed or feed from wild sources. Where the quantity or quality of organic feed available from an approved feedstock origin is inadequate, the daily maximum percentage of non-organic feed shall be 10% based on an annual dry-matter basis. This will be reviewed in 2012.
- 6.4.2 Wild feed sources – operators may use non-organic aquatic animal protein and oil sources provided they are:
- ◆ harvested from local, independently verified, sustainable sources;
  - ◆ verified to have contamination levels below limits established by the appropriate national, regional or Codex standards.
- 6.4.3 Commercial fish meal (i.e. meal made from fish caught only for the production of fish meal and fish oil) – this feed must not constitute more than 90% of the diet with the balance being from organic sources. The percentage of commercial fish meal and fish oil that is permitted will decrease to 50% by 2020.
- 6.4.4 Diets given to aquatic animals shall comply with the requirements of 5.6.4 and 5.6.5.
- 6.4.5 Operators shall feed animals efficiently, with minimum loss of feed to the environment.
- 6.4.6 Feeding aquatic animals on feed produced from the same species as them is prohibited.

## 6.5 AQUATIC ANIMAL HEALTH AND WELFARE

### General principle

Organic management practices promote and maintain the health and well-being of animals through providing balanced organic nutrition and stress-free living conditions appropriate to the species, and selecting breeds with resistance to diseases, parasites and infections. The health of farmed aquatic animals is often influenced by impacts from adjacent land areas, e.g. runoff and erosion, so land management practices must control these potential risks.

### Standard

- 6.5.1 Ensuring the health and well-being of animals shall be primarily based on preventing problems through selecting appropriate operating sites and maintaining good levels of nutrition and living

- conditions so as to enhance the resilience of animals to problems that occur and decrease the risk that these will occur. Operators shall comply with the relevant sections of 5.7.
- 6.5.2 The following are prohibited: prophylactic use of veterinary drugs; allopathic veterinary drugs; antibiotics; synthetic hormones; and synthetic growth promotants.
  - 6.5.3 Stocking densities shall be maintained that do not compromise animal welfare.
  - 6.5.4 Regular monitoring shall be undertaken and records maintained of the following: water quality; stocking densities; and the health and behaviour of animals during each production cycle.

## **6.6 TRANSPORT AND HARVEST OF AQUATIC ANIMALS**

### **General principle**

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

### **Standard**

- 6.6.1 Operators shall comply with relevant requirements of Section 5.8.
- 6.6.2 Operators shall handle live organisms in ways that are compatible with their physiological requirements and minimise stress to the organisms.
- 6.6.3 Operators shall implement defined measures to ensure that organic aquatic animals are provided with conditions during transportation and slaughter that meet the animals' specific needs, including minimising the adverse effects of:
  - a. diminishing water quality
  - b. time spent in transport
  - c. stocking density
  - d. toxic substances
  - e. escape
- 6.6.4 A person specifically responsible for the well-being of the animals shall be present during transport.
- 6.6.5 The slaughter of fish and other aquatic organisms shall be managed so as to avoid unnecessary suffering.

For example, systems should be put in place for stunning vertebrate fish from fish farms before they are slaughtered.

- 6.6.6 Systems shall be established to effectively track organic animals through handling and transport processes.



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PROCESSING AND HANDLING



## 7.1 GENERAL

### General principle

Organic processing and handling provide consumers with nutritious, high-quality supplies of organic products, and provide organic farmers with a market that does not compromise the organic integrity of their products.

### Standard

- 7.1.1 Handlers and processors shall not co-mingle organic and non-organic products.
- 7.1.2 All organic products shall be clearly identified as organic together with the level of certification. Products shall be handled, stored and transported in a way that prevents contact or mixing with conventional products throughout the entire process.
- 7.1.3 Handlers and processors shall take all necessary measures to prevent organic products from being contaminated by pollutants and contaminants, including through cleaning, decontaminating, or if necessary disinfecting facilities and equipment.

## 7.2 INGREDIENTS

### General principle

Organic processed products are made only from organic ingredients. Pacific diets have traditionally been free of highly processed food and there is generally a low level of food processing technology available. A continuation of this minimal level of processing of food and low level of adulteration of food is encouraged.

### Standard

- 7.2.1 All ingredients used in an organic processed product shall be organically produced except for those additives and processing aids listed in Appendix 1, Table 4. If organic ingredients are not available, then non-organically produced ingredients of agricultural origin may be used, provided that:
  - ◆ they are permitted by the certifier and are listed in Table 4;
  - ◆ they are not genetically engineered (see 2.3);
  - ◆ they do not exceed 5% of the content of the agricultural origin component of the product. Water and salt may be used as ingredients in the production of organic products and are not included in the percentage calculations of organic ingredients.
- 7.2.2 Food fortification – minerals (including trace elements), vitamins, amino acids and similar additives shall not be used, unless their use is legally required.
- 7.2.3 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. If preparations of micro-organisms and enzymes are used, they should preferably come from natural sources where these are available. If non-natural sources are used, then the product may lose its organic certification. Processors shall use micro-organisms grown on substrates that consist entirely of organic ingredients and/or substances listed in Appendix 1, Table 4, if available. This includes cultures that are prepared or multiplied in-house.

## 7.3 PROCESSING METHODS

### General principle

Organic food is processed using biological, mechanical and physical methods in a way that maintains the vital quality of each ingredient and the finished product. In the Pacific, food processing typically involves the use of simple methods on a small local scale, resulting in minimal modification of the product and its nutritional value.

### Standard

- 7.3.1 Techniques used to process organic food shall be biological (e.g. fermentation), physical (e.g. drying), and/or mechanical (e.g. pressing) in nature.
- 7.3.2 The use of additives, processing aids, or other materials that chemically react with or modify an organic food shall be restricted – only substances listed in Appendix 1, Table 4 may be used.
- 7.3.3 Only water, ethanol, plant and animal oils, vinegar, carbon dioxide or nitrogen may be used as solvents for extraction. These shall be of a quality appropriate for their purpose.
- 7.3.3 Irradiation is not permitted.
- 7.3.4 Filtration equipment shall not contain asbestos, or utilise techniques or substances that may negatively affect the product.
- 7.3.5 The following conditions of storage are permitted (for substances permitted under these conditions, see Appendix 1, Table 4):
  - ◆ controlled atmosphere
  - ◆ temperature control
  - ◆ drying
  - ◆ humidity regulation
- 7.3.6 Ethylene gas is permitted for ripening.

## 7.4 PEST AND DISEASE MANAGEMENT

### General principle

Organic food is protected from pests and diseases by the use of good manufacturing practices that include proper cleaning, sanitation and hygiene, without the use of chemical treatment or irradiation.

### Standard

- 7.4.1 Preventive pest management measures shall be established and maintained.

An example of preventive management is to establish high standards of hygiene, cleanliness and sanitation to protect areas used for storing, handling and processing organic products.

- 7.4.2 The following methods may be used to manage pests:
  - ◆ Preventive methods such as disruption and elimination of habitats and access to facilities.
  - ◆ Mechanical, physical and biological methods.

- 7.4.3 Where preventive physical, mechanical or biological methods are not effective, then operators can use substances listed in Appendix 1, Table 2, and substances (other than pesticides) used in traps.
- 7.4.4 Prohibited pest control practices include, but are not limited to, the following substances and methods:
- ◆ Pesticides not contained in Appendix 1, Table 2;
  - ◆ Fumigation with ethylene oxide, methyl bromide, aluminium phosphide or other substances not listed in Appendix 1, Table 4. (The use of alternative treatments may be approved under strict controls. However, this must first be discussed with and approved by the certifier.);
  - ◆ Ionising radiation (x-ray of products is permitted).
- 7.4.5 The direct use or application of a prohibited method or material means that the product is no longer organic. Operators shall take all measures necessary to prevent contamination, including removing organic products from a storage or processing facility, and decontaminating equipment or facilities. The application of prohibited substances to equipment or facilities must not contaminate organic products handled or processed in the facility or compromise the organic integrity of the products.

## 7.5 PACKAGING

### General principle

Organic product packaging has minimal adverse impacts on the product and environment. Natural materials, including leaves, fibre, coconut shells, seashells and bamboo, have long been used as packaging in the Pacific. This type of packaging aligns with organic principles and is encouraged where feasible.

### Standard

- 7.5.1 Materials used to package organic food shall not contaminate the product.
- 7.5.2 Packaging materials and storage containers or bins that contain a synthetic fungicide, preservative, or fumigant are prohibited.
- 7.5.3 Organic produce shall not be packaged in reused bags or containers that have been in contact with any substance likely to compromise the organic integrity of products or ingredients placed in those containers.
- 7.5.4 Processors of organic food shall avoid using unnecessary packaging and shall use reusable, recycled, recyclable or biodegradable packaging whenever possible. Containers that have been used for holding prohibited or restricted inputs shall not be used.

## 7.6 CLEANING, DISINFECTING AND SANITISING FOOD AND FOOD PROCESSING FACILITIES

### General principle

Organic food is safe, of high quality, and free of substances used to clean, disinfect, and sanitise food and food processing facilities.

### Standard

- 7.6.1 Operators shall take all necessary precautions to protect organic food against contamination by substances prohibited in organic farming and handling, or by pests, disease-causing organisms and foreign substances. Operators shall identify potential contamination risks and prepare and implement a plan to address these, with an emphasis on using preventive approaches and physical and mechanical means to prevent microbiological contamination. All relevant food safety and hygiene regulations shall be complied with.
- 7.6.2 Only water, and substances listed in Appendix 1, Table 4, as processing aids may be used after harvest as cleaners or disinfectants that come in direct contact with organic food. Substances other than those listed in Appendix 1, Table 5, are only permitted if they are legally required. Any use of these substances shall include consideration of, and commitment to, minimising the environmental impacts of their disposal.
- 7.6.3 Operations that use cleaners, sanitisers and disinfectants on food contact surfaces shall use them in a way that maintains the food's organic integrity.
- 7.6.4 Operators shall perform an intervening action between the use of any cleaner, sanitiser or disinfectant on a surface and contact of organic food with that surface, to prevent residual contamination of the food.
- 7.6.5 Operators shall design facilities and plant layout appropriately, install equipment, and devise cleaning, disinfecting and sanitising systems that prevent the contamination of food and food contact surfaces by prohibited substances, non-organic ingredients, pests, disease-causing organisms or foreign substances.

## 7.7 TEXTILE FIBRE PROCESSING

### General principle

Organic fibre is processed from organic raw materials in an environmentally sound way that considers the entire life cycle of the product. Pacific people have a long history of using plant materials such as pandanus, tapa, fau and coconut, as well as animal skins and bird feathers, for clothing and mats and, until comparatively recently, these materials met most of their needs. In many Pacific countries and territories, making and giving finely crafted mats continues to be culturally important.

### Standard

- 7.7.1 Fibre processing shall comply with the requirements of 7.1 and 7.4.
- 7.7.2 Labelling of textiles shall comply with the requirements of Section 8 (Labelling).

- 7.7.3 Operators shall have a management system in place to ensure that any effluent released into the environment as a result of wet processing is properly treated.
- 7.7.4 Organic fibre processing shall use appropriate techniques that are least damaging to the environment.
- 7.7.5 Whenever possible, organic fibre products shall be processed using only mechanical and/or physical methods.
- 7.7.6 Only substances permitted by the certification body based on the Global Organic Textile Standard (GOTS) shall be used to process fibre products labelled 'organic'.
- 7.7.7 Operators shall avoid the use of non-biodegradable, bio-accumulating inputs and heavy metals. Substances may be allowed in organic textile processing only if they are biodegradable, generally recognised as safe, and hypoallergenic. Substances shall be prohibited in organic textile processing if they are carcinogenic, mutagenic, teratogenic, toxic, or produced using genetically modified organisms or ionising radiation.
- 7.7.8 Organic textiles shall be used to the maximum extent possible and not blended with non-organic fibres.
- 7.7.9 Equipment shall be constructed, maintained, and operated in a way that avoids contamination of fibres and fibre products.
- 7.7.10 Non-organic, natural or synthetic fibres blended with organic fibres shall not contain toxic substances or fibres produced using methods that are hazardous to consumers, workers or the environment.

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LABELLING



## 8.1 GENERAL

### General principle

Organic products are clearly and accurately labelled as organic together with the level of organic status attained, e.g. conversion.

### Standard

- 8.1.1 The name and contact address of the person or company legally responsible for the production or processing of the product and a reference to the certification body shall appear on the product label in its final consumer packaging. National regulatory labelling standards and rules shall be complied with.
- 8.1.2 A statement that the product is 'Produced according to the Pacific Organic Standard' may be made on the label of products that comply with the standard and the appropriate level of organic certification.
- 8.1.3 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 as follows (percentages in this section refer to raw material weight):
- ◆ When 100% of the ingredients contained in a product are of certified organic origin, products may be labeled '100% organic' or equivalent and should carry the certification mark of the certification body.
  - ◆ When a minimum of 95% of the ingredients are of certified organic origin, products may be labelled 'certified organic' or equivalent and should carry the certification mark of the certification body.
  - ◆ When 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' may be used on the principal display in statements such as 'made with organic ingredients', provided there is a clear statement of the proportion of the organic ingredients used. An indication that the product is covered by the certification body may be used, and should appear beside the 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 ingredient list. Such products may not be called 'organic'.
- 8.1.4 Non-organic products used must be of agricultural origin, unavailable in sufficient quantities as certified organic products, and compliant with 7.2.
- 8.1.5 All ingredients in a multi-ingredient product shall be listed on the product label in order of their weight percentage. It shall be apparent which ingredients are of certified organic origin and which are not. All additives shall be listed with their full name.
- 8.1.6 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.
- 8.1.7 Added water and salt shall not be included in the percentage calculations of organic ingredients.
- 8.1.8 The label for conversion products shall be clearly distinguishable from the label for organic products.

- 8.1.9 Organic products shall not be labelled as GMO-free in the context of these standards (see also 2.3). Any reference to genetic engineering on product labels shall be limited to stating that the production and processing methods have not included the use of GMOs.
- 8.1.10 The use of any label or claim that refers to this Pacific Organic Standard shall first be approved by the Regional Organic Task Force, which operates under the auspices of SPC.

## 8.2 FIBRE, TEXTILES AND APPAREL

### General principle

Organic fibre, textiles, and apparel are labelled in a way that accurately conveys the organic content of the product.

### Standard

- 8.2.1 Labelling of textiles shall follow all standards for labelling organic food, with the exceptions made in this section.
- 8.2.2 Apparel and other textile products labelled organic consist of at least 95% by weight of organic fibre, as described in 7.7.
- 8.2.3 Textiles may be labelled ‘made with (...%) organically produced fibres’ only if at least 70% of the fibres are organic as described in 7.7. (Note: percentages in 8.2.2 and 8.2.3 refer to the total weight of the fibres, and do not include the weight of non-textile accessories such as buttons and zippers.)



# 9

## SOCIAL JUSTICE



### Outline and general principle

The Pacific Islands are home to a wide range of societies and cultures from which have evolved diverse social structures and values. There are, however, some commonly held values including the importance of land. The people of the Pacific acknowledge land as their lifeblood and have a spiritual relationship with it that often includes recognition of many intangible values. The extended family and village, and the obligations and benefits that arise from these networks, are also a key feature of Pacific life. Family and community relationships are strengthened by a communal approach to work and life. Many traditions have been established to protect the interests of individuals and groups and these are incorporated in this Pacific Organic Standard with contemporary approaches to ensure that the principles of social justice and human rights are an integral part of organic agriculture and processing in the Pacific. The standard also recognises the need to establish fair and sustainable trading relationships based on trust, transparency, equity, accountability and continuity.

### Standard

- 9.1 Employees and workers shall be guaranteed basic human rights and fair working conditions in accordance with national and international conventions and laws, e.g. ILO conventions and the UN Convention on the Rights of the Child.
- 9.2 An operator who hires more than 10 people for full-time work shall have a documented policy covering the aspects mentioned in this section (Section 9 – Social Justice).
- 9.3 Operators shall not use forced or involuntary labour. Where this occurs, or where there is social injustice, or where production is based on the violation of basic human rights, the resulting product cannot be declared organic.
- 9.4 Employees and contractors of organic operations shall have the freedom to associate, the right to organise, and the right to bargain collectively. Contracts shall be fair, open to negotiation, and honoured in good faith.
- 9.5 Operators shall provide their employees and contractors equal opportunity and treatment, e.g. in relation to wages, and shall not act in a discriminatory way on the basis of factors such as gender, age, colour, ethnicity or religion.
- 9.6 Operators shall not hire child labour. Children may work on their family's farm or a neighbouring farm provided that such work is not dangerous or hazardous to their health and safety, and does not jeopardise their educational, moral, social, and physical development. Any such work shall be supervised by adults or authorised by a legal guardian.
- 9.7 Operators shall respect the rights of indigenous people, and shall not use or exploit land whose inhabitants or farmers have been, or are being, impoverished, dispossessed, colonised, expelled, exiled or killed, nor shall operators use land that is currently in dispute regarding legal or customary local rights to its use or ownership.
- 9.8 All employees and their families who live on an organic property shall have access to potable water, food, housing, education, transportation and health services.
- 9.9 Workers shall have adequate protection from noise, dust and light. Exposure to chemicals shall be within acceptable limits in all production and processing operations.

## Additional social justice guidelines

**1. Worker social security** – operators should provide for the basic social security needs of the employees, including benefits such as parental, sickness and retirement benefits.

**2. Fair trade relationships** – operators should aim to establish agreements between them and buyers that provide mutual benefits, including ensuring that producers receive a fair price for their products; these agreements should be long term (preferably at least three years).

**3. Community relationships** – operators should actively participate in, and positively contribute towards, the society and culture of the local and wider community and families. Examples of contributions could include:

- ◆ training staff in organic and social awareness
- ◆ providing additional on-site services to staff, e.g. organic food
- ◆ sharing profits or equity interest
- ◆ supporting the organic movement and trade union movement
- ◆ educating the public and providing training within the supply chain
- ◆ organising farm visits and demonstrations or facilitating access to the farm by the public
- ◆ supporting or being involved in research and development
- ◆ supporting community cultural activities
- ◆ establishing or supporting composting and recycling programmes
- ◆ marketing products locally



# APPENDIX



**TABLE 1: FERTILISERS AND SOIL CONDITIONERS**

This list is indicative, i.e., there may be other substances that may be used in organic production according to this standard as long as they meet the criteria of the IFOAM Basic Standards or CAC/GL 32. Any additives contained in these products, and any inputs from conventional sources, must also comply with these standards.

Description and requirements for composition of substances	Conditions for use
<b>(i) Plant and animal origin</b>	
Farmyard manure, slurry, urine	Applications shall be composted or followed by at least two green manure crops in cropping systems
Guano	
Vermicastings	
Blood meal, meat meal, bone, bone meal	
Hoof and horn meal, feather meal, fish and fish products, wool, fur, hair, dairy products	
Biodegradable processing by-products of plant or animal origin (e.g. by-products of food, feed, oilseed, brewery, distillery or textile processing) such as molasses, mill mud (sugar cane processing waste), brewers grain	
Crop and vegetable residues, mulch, green manure, cover crops (leguminous crops such as lablab and mucuna), straw	
Wood, bark, sawdust, wood shavings, wood ash, wood charcoal	Only from untreated sources
Seaweed and seaweed products	
Peat (prohibited for soil conditioning)	Excluding synthetic additives; only for inclusion in potting mixes
Plant preparations and extracts	
Compost made from ingredients listed in this Appendix, spent mushroom waste, humus from worms and insects, urban composts from separated sources that are monitored for contamination	

**TABLE 1: FERTILISERS AND SOIL CONDITIONERS (CONT.)**

<b>(ii) Mineral origin</b>	
Basic slag	
Calcareous and magnesium amendments	
Limestone, gypsum, marl, maerl, chalk, sugar beet lime, calcium chloride	
Magnesium rock, kieserite and Epsom salt (magnesium sulphate)	
Mineral potassium (e.g. sulphate of potash, muriate of potash, kainite, sylvanite, Patentkali)	Must be obtained using physical procedures but not enriched by chemical processes
Natural phosphates	Cadmium levels should not exceed 90 mg cadmium/kg P
Pulverised rock, stone meal	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Trace elements, micronutrients	
Sulfur	
Humate	
Tin cans (source of iron)	To be used only where there is no financially viable alternative and iron deficiencies are present. Negative impacts need to be controlled
<b>(iii) Microbiological</b>	
Biodegradable processing by-products of microbial origin (e.g. by-products of brewery or distillery processing)	
Microbiological preparations based on naturally occurring organisms, e.g. mycorrhiza, compost teas, effective micro-organisms	
<b>(iv) Others</b>	
Biodynamic preparations	
Calcium lignosulfonate	
Liquid fertilisers	As long as they comply with the standard and are subject to appropriate treatment to ensure that they are broken down and not too `rich` for plants

**TABLE 2: CROP PROTECTANTS AND GROWTH REGULATORS**

(The use of organically certified inputs, where available, is preferred.)

Description and requirements for composition of substances	Conditions for use
<b>(i) Plant and animal origin</b>	
Algal preparations	
Animal preparations and oils	
Beeswax	
Chitin nematicides (natural origin)	
Coffee grounds	
Corn gluten meal (weed control)	
Dairy products (e.g. milk, casein)	
Gelatine	
Lecithin	
Natural acids (e.g. vinegar)	
Neem ( <i>Azadirachta indica</i> )	
Plant oils (e.g., castor oil, grapefruit seed extract)	Care should be taken with the use of some of these products as they may be very toxic
Plant preparations and plant teas (e.g. chilli, tithonia (Africa sunflower), <i>Tagetes</i> spp., Mexican marigold, papain from papaya, <i>Jatropha</i> , <i>Pongamia glabra</i> )	Care should be taken with the use of some of these products as they may be very toxic
Plant-based repellents	
Propolis	
Pyrethrum ( <i>Chrysanthemum cinerariaefolium</i> )	The synergist piperonyl butoxide shall not be used
Quassia ( <i>Quassia amara</i> )	
Rotenone ( <i>Derris elliptica</i> , <i>Lonchocarpus</i> spp., <i>Tephrosia</i> spp.)	Studies show a link between rotenone and Parkinson's disease; therefore, any use should be limited and should include precautionary measures
Ryania ( <i>Ryania speciosa</i> )	
Sabadilla	
Seaweed, seaweed meal, seaweed extracts	
Tobacco tea	Pure nicotine shall not be used
<b>(ii) Mineral origin</b>	
Chloride of lime	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Copper salts (e.g., sulphate, hydroxide, oxychloride, octanoate)	Maximum 8 kg/ha per year (on a rolling average basis)
Diatomaceous earth	
Light mineral oils (paraffin)	
Lime sulfur (calcium polysulfide)	
Potassium bicarbonate	
Potassium permanganate	
Quicklime	
Silicates (e.g. sodium silicates, quartz)	
Sodium bicarbonate	
Sulfur	

**TABLE 2: CROP PROTECTANTS AND GROWTH REGULATORS (CONT.)**

<b>(iii) Micro-organisms</b>	
Fungal preparations	
Bacterial preparations (e.g., <i>Bacillus thuringiensis</i> )	
Release of parasites, predators, and sterilised insects	
Viral preparations (e.g., granulosis virus)	
<b>(iv) Others</b>	
Biodynamic preparations	
Calcium hydroxide	
Carbon dioxide	
Ethyl alcohol	
Homeopathic and Ayurvedic preparations	
Iron phosphate (for use as molluscicides)	
Sea salt and saltwater	
Soda	
Soft soap	
Sulfur dioxide	
<b>(v) Traps, barriers, repellents</b>	
Physical methods (e.g. chromatic traps, mechanical traps)	
Mulches, nets (e.g. insect-proof nets)	
Pheromones (in traps and dispensers only)	Traps for fruit-fly and substances as required by regulations are permitted

**TABLE 3: NATURAL SUBSTANCES THAT MAY NOT BE USED IN ORGANIC PLANT PRODUCTION**

This list, which is normative, contains natural substances that may not be used in organic production according to this standard.

Description and composition of substances	Comments
Nicotine (pure)	Tobacco tea is permitted; however, safety measures shall be taken to reduce skin contact
Chilean nitrate and all synthetic nitrogenous fertilisers including urea	Chilean nitrate (sodium nitrate) may not be used on certified organic farms because it contains sodium that could build up and be harmful to the crop

**TABLE 4: ADDITIVES AND PROCESSING AIDS FOR ORGANIC FOOD PROCESSING**

The list is indicative, i.e. there may be other substances that may be used in organic production according to this standard as long as they follow the criteria in the IFOAM Basic Standards or CAC/GL 32. Where the substances listed in this Appendix can be found in nature, natural sources are preferred. Substances of certified organic origin are preferred.

International Numbering System (INS)	Product	Additive	Processing aid	Limitation/note
INS 170	Calcium carbonate		X	
INS 181	Tannin		X	Only for wine
INS 184	Tannic acid		X	Filtration aid for wine
INS 220	Sulfur dioxide	X		Only for wine
INS 224	Potassium metabisulphite	X		Only for wine
INS 270	Lactic acid	X	X	
INS 290	Carbon dioxide	X	X	
INS 296	L-malic acid	X	X	
INS 300	Ascorbic acid	X		
INS 306	Tocopherols, mixed natural concentrates	X		
INS 322	Lecithin	X	X	
INS 330	Citric acid	X	X	
INS 331	Sodium citrates	X		
INS 332	Potassium citrates	X		
INS 333	Calcium citrates	X		
INS 334	Tartaric acid and salts	X	X	Only for wine
INS 335	Sodium tartrate	X	X	
INS 336	Potassium tartrate	X	X	
INS 341	Monocalcium phosphate	X		Only for 'raising' flour
INS 342	Ammonium phosphate	X		Restricted to 0.3 gm/L in wine
INS 400	Alginic acid	X		
INS 401	Sodium alginate	X		
INS 402	Potassium alginate	X		
INS 406	Agar	X		
INS 407	Carrageenan	X		
INS 410	Locust bean gum	X		
INS 412	Guar gum	X		
INS 413	Tragacanth gum	X		
INS 414	Arabic gum	X		Only for milk products, fat products, confectionery, sweets, eggs
INS 415	Xanthan gum	X		Only for fat, fruit and vegetable products and cakes and biscuits
INS 440	Pectin	X		Unmodified

**TABLE 4: ADDITIVES AND PROCESSING AIDS FOR ORGANIC FOOD PROCESSING (CONT.)**

International Numbering System (INS)	Product	Additive	Processing aid	Limitation/note
INS 500	Sodium carbonates	X	X	
INS 501	Potassium carbonates	X	X	
INS 503	Ammonium carbonates	X		Only for cereal products, confectionery, cakes and biscuits
INS 504	Magnesium carbonates	X		
INS 508	Potassium chloride	X		
INS 509	Calcium chloride	X	X	
INS 511	Magnesium chloride	X	X	Only for soybean products
INS 513	Sulfuric acid		X	pH adjustment of water during sugar processing
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 (this is the amount to be used – none should remain in the wine)
INS 524	Sodium hydroxide	X	X	For sugar processing and surface treatment of traditional bakery products
INS 526	Calcium hydroxide	X	X	Food additive for maize and 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	Only for wine, fruit, and vegetables
	Hazelnut shells		X	
	Isinglass		X	Only for wine
	Kaolin		X	
	Perlite		X	
	Preparations of bark		X	Only for sugar
	Vegetable oil		X	Greasing or releasing agent
	Water		X	

**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 criteria established by the organic certifier.

**PREPARATIONS OF MICRO-ORGANISMS AND ENZYMES FOR USE IN FOOD PROCESSING  
(SEE 7.2.3)**

The following may be used as ingredient or processing aids with approval based on the criteria established by the organic certifier.

- ◆ Organic certified micro-organisms
- ◆ Preparations of micro-organisms
- ◆ Enzymes and enzyme preparations

**TABLE 5: CLEANSERS AND DISINFECTANTS APPLIED DIRECTLY TO FOOD PREPARATION SURFACES**

Product	Limitation/Note
Acetic acid	
Alcohol, ethyl (ethanol)	
Alcohol, isopropyl (isopropanol)	
Calcium hydroxide (slaked lime)	
Calcium hypochlorite	
Calcium oxide (quicklime)	
Chloride of lime (calcium oxychloride, calcium chloride and calcium hydroxide)	
Chlorine dioxide	
Citric acid	
Formic acid	
Hydrogen peroxide	
Lactic acid	
Natural essences of plants	
Oxalic acid	
Ozone	
Peracetic acid	
Phosphoric acid	Only for dairy equipment
Plant extracts	
Potassium soap	
Sodium carbonate	
Sodium hydroxide (caustic soda)	
Sodium hypochlorite	e.g. as a liquid bleach
Sodium soap	