

Training Manual
Certification and Inspection Systems
in Organic Farming in India

Compiled by
Dr. A.K. Yadav

Government of India
Ministry of Agriculture
Department of Agriculture and Cooperation
National Centre of Organic Farming
CGO-II, Kamla Nehru Nagar, Ghaziabad, UP – 201 002
Phone 0120-2721905, 2721896, 2753844
Email – nbdc@nic.in, Website – www.dacnet.nic.in/ncof

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Chapter 1

ORGANIC AGRICULTURE

Organic Agriculture or farming is very much native to this land. Whosoever tries to write a history of organic farming will have to refer India and China. The farmers of these two countries are farmers of 40 centuries and it is organic farming that sustained them. This concept of organic farming is based on following principles:

- Nature is the best role model for farming, since it does not use any inputs nor demand unreasonable quantities of water.
- The entire system is based on intimate understanding of nature's ways. The system does not believe in mining of the soil of its nutrients and do not degrade it in any way for today's needs.
- The soil in this system is a living entity
- The soil's living population of microbes and other organisms are significant contributors to its fertility on a sustained basis and must be protected and nurtured at all cost.
- The total environment of the soil, from soil structure to soil cover is more important.

In today's terminology it is a method of farming system which primarily aims at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (biofertilizers) to release nutrients to crops for increased sustainable production in an eco-friendly pollution free environment.

In philosophical terms organic farming means "farming in spirits of organic relationship. In this system every thing is connected with every thing else. Since organic farming means placing farming on integral relationship, we should be well aware about the relationship between the soil, water and plants, between soil-soil microbes and waste products, between the vegetable kingdom and the animal kingdom of which the apex animal is the human being, between agriculture and forestry, between soil, water and atmosphere etc. It is the totality of these relationships that is the bed rock of organic farming.

Organic Agriculture – the Perspective

"In a world of many choices organic agriculture is a serious option for many farmers and consumers. Supporting that choice with credible science and critical evaluation is vital for improving the productivity and environmental impact of organic agriculture. The challenge of organic agriculture will depend in part on the location but some concerns will affect organic farmers and the movement alike across the world."

Organic Concept and its Origin

The term 'organic' was first used in relation to farming by Northbourne (1940) in his book *Look to the Land*: "the farm itself should have a biological completeness; it must be a living entity, it must be a unit which has within itself a balanced organic life'. Clearly, Northbourne was not simply referring to organic inputs such as

compost, but rather to the concept of managing a farm as an integrated, whole system. The use of organic in reference to agricultural production and food is legally constrained in many countries. Many farmers in less developed countries may practice organic agriculture by default based on their traditional methods of production. However, it is useful to provide a general definition of organic agriculture to indicate briefly what the production systems are designed to achieve; the international food standards *Codex Alimentarius* in association with IFOAM and FAO:

Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasizes, the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using, where possible, agronomic, biological, and mechanical methods, as opposed to using synthetic materials, to fulfill any specific function within the system (FAO, 1999).

This holism dates back to the origin of organic agriculture in that the farm was not viewed as a collection of separate parts but a single, self-managing organism. This view of the farm as an organism is the origin of the term organic.

The perspective used here is based on the codex definition just stated above and further includes the full organic and biodynamic supply chain from inputs to final manufactured goods, as well cultural and social aspects of the movement and not just the on farm production aspects. The continued existence of a social and political role for organic agriculture makes it more than just an organic industry.

Many of the practices of organic agriculture were the only option for farmers before the advent of chemically synthesized fertilizers, pesticides, biocides, medicines, mechanization and fossil fuels that allow industrial agriculture to function. Without recourse to such technologies, farmers had no option but to work within biological and ecological systems. Failing to rotate crops caused a build up of pests, as there were no pesticides to control them. From this perspective, organic agriculture is the original and mainstream agriculture and "conventional" industrial agriculture is the one that departs from the practices that agriculture has been following since its inception.

The commonly used term 'conventional agriculture' refers to the standard, dominant farming approaches practiced by farmers throughout the world. The term conventional masks the great diversity of management strategies used; for example, a conventional farmer may use mineral fertilizers but also use herbicides to control weeds. Usually conventional agriculture imposes no restrictions on management other than those required by law.

Organic Perspective Changing with the Times

After almost a century of development, organic agriculture has been embraced by the mainstream and shows great promise commercially, socially and environmentally. While there is continuum of thought from the earliest days to the present, the modern organic movement is radically different from its original forms. It

now has environmental sustainability at its core in addition to the founders concerns for healthy soil, healthy food and healthy people.

Since the 1970s when organic agriculture re-emerged as an eco-agriculture, institutional strengthening and diversity became a part of the movement. Formation of IFOAM in 1972 indicated that the movement has come of age and that it is going to grow and make a place for itself in over all world of agriculture. Explosive growth of organic agriculture has occurred only since 1990s.

The Principles of Organic Agriculture

To understand the motivation of organic farmers, the practices they use and what they want to achieve, it is important to understand the guiding principles of organic agriculture. These principles encompass the fundamental goals and caveats that are considered important for producing high quality food, fibre and other goods in an environmentally sustainable way. The principles of organic agriculture have changed with the evolution of the movement and are now codified. The principles apply to agriculture in the broadest sense, including the way people tend soils, water, plants and animals in order to produce, prepare and distribute food and other goods. They concern the way people interact with living landscapes, relate to one another and shape the legacy of future generations. The principles of organic agriculture serve to inspire the organic movement in its full diversity. They are the roots from which organic agriculture grows and develops. They express the contribution that organic agriculture can make to the world and a vision to improve all agriculture in a global context. The Principles of Organic Agriculture serve to inspire the organic movement in its full diversity.

The International Federation for Organic Agriculture Movement's (IFOAM) definition of Organic agriculture is based on:

The principle of health
The principle of ecology
The principle of fairness and
The principle of care

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

Principle of health

Organic Agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible. This principle points out that the health of individuals and communities cannot be separated from the health of ecosystems - healthy soils produce healthy crops that foster the health of animals and people. Health is the wholeness and integrity of living systems. It is not simply the absence of illness, but the maintenance of physical, mental, social and ecological well-being. Immunity, resilience and regeneration are key characteristics of health. The role of organic agriculture, whether in farming, processing, distribution, or consumption, is to sustain and enhance the health of ecosystems and organisms from the smallest in the soil to human beings. In particular, organic agriculture is intended to produce

high quality, nutritious food that contributes to preventive health care and well-being. In view of this it should avoid the use of fertilizers, pesticides, animal drugs and food additives that may have adverse health effects.

Principle of ecology

Organic Agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them. This principle roots organic agriculture within living ecological systems. It states that production is to be based on ecological processes, and recycling. Nourishment and well-being are achieved through the ecology of the specific production environment. For example, in the case of crops this is the living soil; for animals it is the farm ecosystem; for fish and marine organisms, the aquatic environment. Organic farming, pastoral and wild harvest systems should fit the cycles and ecological balances in nature. These cycles are universal but their operation is site-specific. Organic management must be adapted to local conditions, ecology, culture and scale. Inputs should be reduced by reuse, recycling and efficient management of materials and energy in order to maintain and improve environmental quality and conserve resources. Organic agriculture should attain ecological balance through the design of farming systems, establishment of habitats and maintenance of genetic and agricultural diversity. Those who produce, process, trade, or consume organic products should protect and benefit the common environment including landscapes, climate, habitats, biodiversity, air and water.

Principle of fairness

Organic Agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities. Fairness is characterized by equity, respect, justice and stewardship of the shared world, both among people and in their relations to other living beings. This principle emphasizes that those involved in organic agriculture should conduct human relationships in a manner that ensures fairness at all levels and to all parties - farmers, workers, processors, distributors, traders and consumers. Organic agriculture should provide everyone involved with a good quality of life, and contribute to food sovereignty and reduction of poverty. It aims to produce a sufficient supply of good quality food and other products. This principle insists that animals should be provided with the conditions and opportunities of life that accord with their physiology, natural behavior and well-being. Natural and environmental resources that are used for production and consumption should be managed in a way that is socially and ecologically just and should be held in trust for future generations. Fairness requires systems of production, distribution and trade that are open and equitable and account for real environmental and social costs.

Principle of care

Organic Agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment. Organic agriculture is a living and dynamic system that responds to internal and external demands and conditions. Practitioners of organic agriculture can enhance efficiency and increase productivity, but this should not be at the risk of jeopardizing health and well-being. Consequently, new technologies need to be assessed and existing methods reviewed. Given the incomplete understanding of ecosystems and agriculture, care must be taken. This principle states that precaution and responsibility are the key concerns in management, development and

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

Comparative Perspective of Organic and Conventional Agriculture

While organic agriculture aims to be environmentally sustainable, it has not yet reached its goals and there are issues that still need to be addressed. One such issue is about the yields. ***And the often asked question is : Can organic agriculture feed the world? The appropriate answer may be - does conventional agriculture successfully feed the world now?*** High input-high yielding systems are currently failing to feed the world, not because of problems with productivity, but because of problems with food distribution and social organization, and serious concerns such as poverty, racism and gender imbalance.

Over the years researchers have been busy working out the comparisons between the two systems for yield, economics, resource use efficiency, environmental impacts and social factors on diverse range of farm types such as dairies, orchards and mixed farming systems. Several studies have confirmed that organic agriculture is productive and sustainable (Mader *et. al.*, 2002, Reganold *et al* 1993, Drinkwater *et. al.*, 1998). Some key findings from research on yields (Wynen, 1994; Mendoza, 2002; Stone house *et. al.*, 2001) suggest that;

- Yields equivalent to or better than conventional agriculture can be achieved under organic systems, although it requires long term planning;
- Yields decrease during conversion period but then improve afterwards;
- Organic farms have higher soil biological activity and biodiversity;
- Weeds can have major impact on yields and pests on specific crops, are problematic;
- Organic agriculture causes no/or very little pesticide contamination in food, people and the environment; and
- The beneficial effects of organic agriculture in food quality are appealing but are yet to be authenticated.

Organic agriculture aims at a sustainable production system based on natural processes. Key characteristics are that organic agriculture:

- relies primarily on local, renewable resources;
- makes efficient use of solar energy and the production potential of biological systems;
- maintains the fertility of the soil;
- maximises recycling of plant nutrients and organic matter;
- does not use organisms or substances foreign to nature (e.g. GMOs, chemical fertilisers or pesticides);

- maintains diversity in the production system as well as the agricultural landscape;
- gives farm animals life conditions that correspond to their ecological role and allow them a natural behaviour.

Organic agriculture is a sustainable and environmentally friendly production method, which has particular advantages for small-scale farmers. Available evidence indicates the appropriateness of organic agriculture for small farmers in developing countries, notably in Asia. Organic agriculture contributes to poverty alleviation and food security by a combination of many features, such as;

- increasing yields in low-input areas;
- conserving bio-diversity and nature resources on the farm and in the surrounding area;
- increasing income and/or reducing costs;
- producing safe and varied food;
- being sustainable in the long term.

The evaluations by IFAD in India and China (Giovannucci, 2005) reported that the income of participating farmers can increase substantially. Certified production gives access to a premium market, or simply just better market access.

The world of organic agriculture

As per the details released at BioFach 2010 at Nuremberg, the organic agriculture is developing rapidly, and statistical information is now available from 154 countries of the world. Its share of agricultural land and farms continues to grow in many countries. The main results of the latest global survey on certified organic farming are summarized below:

Growing area under certified organic agriculture

- 35 million hectares of agricultural land are managed organically by almost 1.4 million producers.
- The regions with the largest areas of organically managed agricultural land are Oceania (12.1 million hectares), Europe (8.2 million hectares) and Latin America (8.1 million hectares). The countries with the most organic agricultural land are Australia, Argentina and China.
- The highest shares of organically managed agricultural land are in the Falkland Islands (36.9 percent), Liechtenstein (29.8 percent) and Austria (15.9 percent).
- The countries with the highest numbers of producers are India (340'000 producers), Uganda (180'000) and Mexico (130'000). More than one third of organic producers are in Africa.
- On a global level, the organic agricultural land area increased in all regions, in total by almost three million hectares, or nine percent, compared to the data from 2007.
- Twenty-six percent (or 1.65 million hectares) more land under organic management was reported for Latin America, mainly due to strong growth in Argentina. In Europe the organic land increased by more than half a million hectares, in Asia by 0.4 million.

- About one-third of the world's organically managed agricultural land – 12 million hectares is located in developing countries. Most of this land is in Latin America, with Asia and Africa in second and third place. The countries with the largest area under organic management are Argentina, China and Brazil.
- 31 million hectares are organic wild collection areas and land for bee keeping. The majority of this land is in developing countries – in stark contrast to agricultural land, of which two-thirds is in developed countries. Further organic areas include aquaculture areas (0.43 million hectares), forest (0.01 million hectares) and grazed non-agricultural land (0.32 million hectares).

Almost two-thirds of the agricultural land under organic management is grassland (22 million hectares). The cropped area (arable land and permanent crops) constitutes 8.2 million hectares, (up 10.4 percent from 2007), which represents a quarter of the organic agricultural land.

Standards and regulations - 2009 witnessed several major developments in the field of standards and regulations. The new EU regulation on organic production came into force as well as the Canadian organic standard. Furthermore, the Australian domestic organic standard was implemented. Canada and the U.S. concluded the world's first fully reciprocal agreement between regulated organic systems, and the EU introduced procedures for approving certification bodies from outside the EU. It is expected that these developments will ease trade in organic products and foster the future growth of the sector. The number of countries with organic standards has increased to 73, and there are 16 countries that are in the process of drafting legislation. In 2009, FAO, IFOAM and UNCTAD started the Global Organic Market Access (GOMA) project. The aim of GOMA is to facilitate equivalence, harmonization and other types of cooperation in order to simplify the process for trade flow of products among the various organic guarantee systems. There has been modest growth in the number of certification bodies. The total is 488, up from 481 in 2008. Most certification bodies are in the European Union, the United States, Japan, South Korea, China, Canada, and Brazil. A growing number of organic producers are certified through Participatory Guarantee Systems (PGS) across the world. PGS are locally focused quality assurance systems. It is estimated that around 10'000 small operators are involved in PGS world-wide. The leading countries with regards to PGS are located in the global South. Several organic standard setters have also developed draft standards for climate "add-ons" for organic certification, and it is expected that the use of carbon labeling by retailers will grow considerably in the future.

Organic Agriculture in India Emergence

The growth of organic agriculture in India has three dimensions and is being adopted by farmers for different reasons. First category of organic farmers are those which are situated in no-input or low-input use zones, for them organic is a way of life and they are doing it as a tradition (may be under compulsion in the absence of resources needed for conventional high input intensive agriculture). Second category of farmers are those which have recently adopted the organic in the wake of ill effects of conventional agriculture, may be in the form of reduced soil fertility, food toxicity or increasing cost and diminishing returns. The third category comprised of farmers and enterprises which have systematically adopted the commercial organic

agriculture to capture emerging market opportunities and premium prices. While majority of farmers in first category are traditional (or by default) organic they are not certified, second category farmers comprised of both certified and un-certified but majority of third category farmers are certified. These are the third category commercial farmers which are attracting most attention. The entire data available on organic agriculture today, relates to these commercial organic farmers

Growing area

Emerging from 42,000 ha under certified organic farming during 2003-04, the organic agriculture has grown almost 29 fold during the last 5 years. By March 2010 India has brought more than 4.48 million ha area under organic certification process. Out of this cultivated area accounts for 1.08 million ha while remaining 3.4 million ha is wild forest harvest collection area. Year wise growth of cultivated area under organic management is shown in Table 1. Overall status of organic production projects, processors, quantity produced, quantity exported and the value of export is given in Table 2.

Regulatory mechanism

For quality assurance the country has internationally acclaimed certification process in place for export, import and domestic markets. National Programme on Organic Production (NPOP) defines the regulatory mechanism and is regulated under two different acts for export and domestic markets. NPOP notified under Foreign Trade Development and Regulation Act (FTDR) looks after the export requirement. The NPOP notified under this act has already been granted equivalence by European Union and Sweden. USDA has also accepted the conformity assessment system of NPOP. Due to this, the product certified by any Indian accredited certification agency under NPOP can be exported to Europe, Sweden and USA without the requirement of re-certification.

To look after the requirement of import and domestic market the same NPOP has been notified under Agriculture Produce Grading, Marking and Certification Act (APGMC). Regulatory body of NPOP under FTDR act is Agricultural and Processed Foods Export Development Authority (APEDA) under Ministry of Commerce and of NPOP under APGMC act is Agricultural Marketing Advisor (AMA) under Ministry of Agriculture. Accreditation of Certification and Inspection Agencies is being granted by a common National Accreditation Body (NAB). 20 accredited certification agencies are looking after the requirement of certification process. Out of these 4 agencies are under public sector while remaining 16 are under private management.

Growing number of farmers and operators - Out of total 2099 operators, while processors account for 427 and individual farmers 753, majority of farmers i.e. 597,873 are small and marginal farmers covered by 919 grower groups. Out of the total organic producers in the world approximately half of them are in India. This is mainly because of small holdings with each producer.

Table – 1 Growth of area under organic management

S.No.	Years	Area under Organic management in Ha
1.	2003-04	42,000
2.	2004-05	76,000
3.	2005-06	1,73,000
4.	2006-07	5,38,000
5.	2007-08	8,65,000
6.	2008-09	12,07,000
7.	2009-10	10,85,648

Table 2 Overall status of organic production projects, processors, quantity produced, quantity exported and the value of export (Year 2009-10)

S.No.	Component	Quantum
1.	Area under Organic certification Process (ha) Full organic In-conversion Total	757978.71 327669.74 1085648.45
2.	No. of Farmers under Organic certification Process Full organic In-conversion Total	351297 246576 597873
3.	Number of operators	2099
4.	Number of processors	427
5.	Number of grower groups	919
6.	Number of exporters	253
7.	Total Production (MT)	1,811,111
8.	Total quantity exported (MT)	53,918
9.	Value of export in US \$	116.09 million
10.	Value of export in INR Rs.	591 crores INR

Chapter 2

Organic Certification

Organic certification

It is a certification process for producers of organic food and other organic agricultural products. In general, any business directly involved in food production can be certified, including seed suppliers, farmers, food processors, retailers and restaurants. Requirements vary from country to country, and generally involve a set of production standards for growing, storage, processing, packaging and shipping that include:

- avoidance of synthetic chemical inputs (e.g. fertilizer, pesticides, antibiotics, food additives, etc) and genetically modified organisms;
- use of farmland that has been free from chemicals for a number of years (often, three or more);
- keeping detailed written production and sales records (audit trail);
- maintaining strict physical separation of organic products from non-certified products;
- undergoing periodic on-site inspections.

In some countries, certification is overseen by the government, and commercial use of the term *organic* is legally restricted. Certified organic producers are also subject to the same agricultural, food safety and other government regulations that apply to non-certified producers.

Purpose of certification

Organic certification addresses a growing worldwide demand for organic food. It is intended to assure quality and prevent fraud. For organic producers, certification identifies suppliers of products approved for use in certified operations. For consumers, "certified organic" serves as a product assurance, similar to "low fat", "100% whole wheat", or "no artificial preservatives".

Certification is essentially aimed at regulating and facilitating the sale of organic products to consumers. Individual certification bodies have their own service marks, which can act as branding to consumers—a certifier may promote the high consumer recognition value of its logo as a marketing advantage to producers. Most certification bodies operate organic standards that meet the National government's minimum requirements.

The certification process

In order to certify a farm, the farmer is typically required to engage in a number of new activities, in addition to normal farming operations:

- **Study** the organic standards, which cover in specific detail what is and is not allowed for every aspect of farming, including storage, transport and sale.
- **Compliance** - farm facilities and production methods must comply with the standards, which may involve modifying facilities, sourcing and changing suppliers, etc.

- **Documentation** - extensive paperwork is required, detailing farm history and current set-up, and usually including results of soil and water tests.
 - **Planning** - a written annual production plan must be submitted, detailing everything from seed to sale: seed sources, field and crop locations, fertilization and pest control activities, harvest methods, storage locations, etc.
 - **Inspection** - annual on-farm inspections are required, with a physical tour, examination of records, and an oral interview.
 - **Fee** – A fee is to be paid by the grower to the certification body for annual surveillance and for facilitating a mark which is acceptable in the market as symbol of quality.
 - **Record-keeping** - written, day-to-day farming and marketing records, covering all activities, must be available for inspection at any time.
- In addition, short-notice or surprise inspections can be made, and specific tests (e.g. soil, water, plant tissue) may be requested.
- For first-time farm certification, the soil must meet basic requirements of being free from use of prohibited substances (synthetic chemicals, etc) for a number of years. A conventional farm must adhere to organic standards for this period, often, three years. This is known as being in *transition*. Transitional crops are not considered fully organic. A farm already growing without chemicals may be certified without this delay.

Certification for operations other than farms is similar. The focus is on ingredients and other inputs, and processing and handling conditions. A transport company would be required to detail the use and maintenance of its vehicles, storage facilities, containers, and so forth. A restaurant would have its premises inspected and its suppliers verified as certified organic.

Certification & Product Labelling

Being able to put the word "organic" on a food product is a valuable marketing advantage in today's consumer market. Certification is intended to protect consumers from misuse of the term, and make buying organics easy. However, the organic labelling made possible by certification itself usually requires explanation. In many countries organic legislation defines three levels of organics. Products made entirely with certified organic ingredients and methods can be labelled "100% organic". Products with 95% organic ingredients can use the word "organic". Both may also display organic seal. A third category, containing a minimum of 70% organic ingredients, can be labelled "made with organic ingredients". In addition, products may also display the logo of the certification body that approved them. Products made with less than 70% organic ingredients can not advertise this information to consumers and can only mention this fact in the product's ingredient statement.

Certification around the world

In some countries, organic standards are formulated and overseen by the government. The United States, the European Union and Japan have comprehensive organic legislation, and the term "organic" may be used only by certified producers. In countries without organic laws, government guidelines may or may not exist, while certification is handled by non-profit organizations and private companies.

EU countries acquired comprehensive organic legislation with the implementation of the EU-Eco-regulation 1992. Certification is handled on the national level.

- In the United Kingdom, organic certification is handled by a number of organizations, of which the largest are the Soil Association and Organic Farmers and Growers. All the certifying bodies are subject to the regulations of the UK Register of Organic Food Standards (UKROFS), which itself is bound by EU legislation.
- In Sweden, organic certification is handled by the private corporation KRAV.

In the US, the National Organic Program (NOP), was enacted as federal legislation in Oct. 2002. It restricts the use of the term "organic" to certified organic producers (excepting growers selling under \$5,000 a year, who must still comply and submit to a records audit if requested, but do not have to formally apply). Certification is handled by state, non-profit and private agencies that have been approved by the US Department of Agriculture (USDA).

In Canada, the government has published a national organic standard, but it is a guideline only; legislation is in process. Certification is provided by private sector organizations. In Quebec, provincial legislation provides government oversight of organic certification within the province, through the Quebec Accreditation Board (*Conseil D'Accréditation Du Québec*).

In Japan, the Japanese Agricultural Standard (JAS) was fully implemented as law in April, 2001. This was revised in November of 2005 and all JAS certifiers were required to be re-accredited by the Ministry of Agriculture.

In Australia, the Australian Quarantine and Inspection Service (AQIS) is the controlling body for organic certification because there are no domestic standards for organic produce within Australia. Currently the government only becomes involved with organic certification at export, meaning AQIS is the default certification agency. Although there is no system for monitoring the labeling of organic produce sold within Australia, this primarily effects the retail public. Commercial buyers for whom this is an issue have simply taken the export system as a de facto standard and are willing to pay premium prices for produce from growers certified under the National schemes. As of 2006, there are seven AQIS-approved certifying organisations authorised to issue Organic Produce Certificates, and in 2004 there were 2345 certified operators. The largest importer of Australia's organic produce (by weight) is Japan (33.59%), followed by the UK (17.51%), France (10.51%), and New Zealand (10.21%). The largest certifier of organic products is Australian Certified Organic, which is a subsidiary of Biological Farmers Australia, the largest organic farmers' collective in the country.

In China, the China Green Food Development Center awards two Standards: A and AA; while the former standard does permit some use of synthetic agricultural chemicals, the latter is more stringent.

In India, Agricultural Processed Foods Export Development Authority (APEDA) under Ministry of Commerce is the controlling body for organic certification for export. Till date there are no domestic standards for organic produce within India. Currently 11 certification agencies have been authorized to undertake certification

process under National Programme for Organic Production (NPOP). Although there is no system for monitoring the labeling of organic produce sold within India, this primarily affects the retail public. Commercial buyers for whom this is an issue have simply taken the export system as a de facto standard and are willing to pay premium prices for produce from growers certified under the NPOP.

Internationally, equivalency negotiations are underway, and some agreements are already in place, to harmonize certification between countries, facilitating international trade. There are also international certification bodies, including members of the International Federation of Organic Agriculture Movements (IFOAM), the Organic Crop Improvement Association (OCIA), and Ecocert. Where formal agreements do not exist between countries, organic product for export is often certified by agencies from the importing countries, who may establish permanent foreign offices for this purpose.

In 2006, India's organic certification process under NPOP has been granted equivalence with European Union. It has also been recognized for conformity assessment by USDA's NOP.

Organic logos of some of the countries are given below:



European Union



United States of America



Multinational Corporation



Canada



Japan



Australia



Chapter 3

India

Regulatory Mechanism for Organic certification in India

To provide a focused and well directed development of organic agriculture and quality products, Ministry of Commerce and Industry, Government of India, launched a National Program on Organic Production (NPOP) in the year 2000, which was formally notified in October 2001 under the Foreign Trade & Development Act (FTDR Act). This document provides information on standards for organic production, systems criteria, and procedures for accreditation of Inspection and Certification bodies, the national organic logo and the regulations governing its use. The standards and procedures have been formulated in harmony with international standards such as those of Codex and IFOAM.

Scope and operational structure

The National Programme for Organic Production proposes to provide an institutional mechanism for the implementation of National Standards for Organic Production, through a National Accreditation Policy and Programme. The aims of the National Programme for organic production, inter alia, includes the following:

- a. To provide the means of evaluation of certification programmes for organic agriculture and products as per the approved criteria.
- b. To accredit certification programmes
- c. To facilitate certification of organic products in conformity to the National Standards for Organic Products.
- d. To encourage the development of organic farming and organic processing

Scope

The National Programme for Organic Production shall, among others, includes:

- (a) Policies for development and certification of organic products
- (b) National standards for organic products and processes
- (c) Accreditation of programmes to be operated by Inspection and Certification Agencies
- (d) Certification of organic products

Operational Structure:

The operational structure of the National Programme for Organic Production is given in Fig. 1. The programme will be developed and implemented by the Government of India through its Ministry of Commerce and Industry as the apex body. The Ministry will constitute a National Steering Committee for National Programme for Organic Production, whose members will be drawn from Ministry of Commerce and Industry, Ministry of Agriculture, Agricultural and Processed Food Products Export Development Authority (APEDA), Coffee Board, Spices Board and Tea Board and other government and private organizations associated with the organic movement. To advise the National Steering Committee on relevant issues pertaining to National Standards and Accreditation, sub-committees will be appointed. The National

Steering Committee for National Programme for Organic Production will formulate a National Accreditation Policy and Programme and draw up National Standards for Organic Products, which will include standards for organic production and processes as well as the regulations for use of the National Organic Certification Mark. National Accreditation Policy and Programme will be administered by the National Accreditation Body, which will define the overall policy objectives for the Accreditation programmes and operations. The National Steering Committee may amend the Accreditation procedures whenever it deems fit. The National Accreditation Policy and Programme is subject to periodic internal review, which will be conducted by the Technical Committee, which will advise the National Steering Committee about the need and content of such amendments in the National Programme for Organic Production.

National Accreditation Body

The National Steering Committee would also function as the National Accreditation Body. The members of the National Accreditation Body shall comprise of representatives from Ministry of Agriculture, Ministry of Commerce and Industry, APEDA, Coffee Board, Spices Board and Tea Board. The Chairman of the Body shall be the Chairman of the National Steering Committee. The work of the National Accreditation Body will include:

- (a) Drawing up procedures for evaluation and Accreditation of certification programmes.
- (a) Formulating procedures for evaluation of the agencies implementing the programmes.
- (b) Accreditation of inspection and certification agencies

Every certifier will implement a certification programme and a programme cannot be accredited without accrediting the certifier.

Evaluation Committee

Eligible Inspection and Certification Agencies implementing certification programmes will be evaluated by an Evaluation Committee. The Evaluation Committee will be appointed by the National Accreditation Body. The members of the Evaluation Committee will comprise of members drawn from the APEDA, Coffee Board, Spices Board, Tea Board, Ministry of Agriculture and Export Inspection Council of India (EIC) / Export Inspection Agencies (EIAs). APEDA, on behalf of the National Accreditation Body, will receive and screen applications from the certification agencies, will coordinate and arrange evaluation visits etc. to ascertain the credentials of certification programmes of the applicants. The Evaluation Committee will submit its recommendations to the National Accreditation Body for considering accreditation.

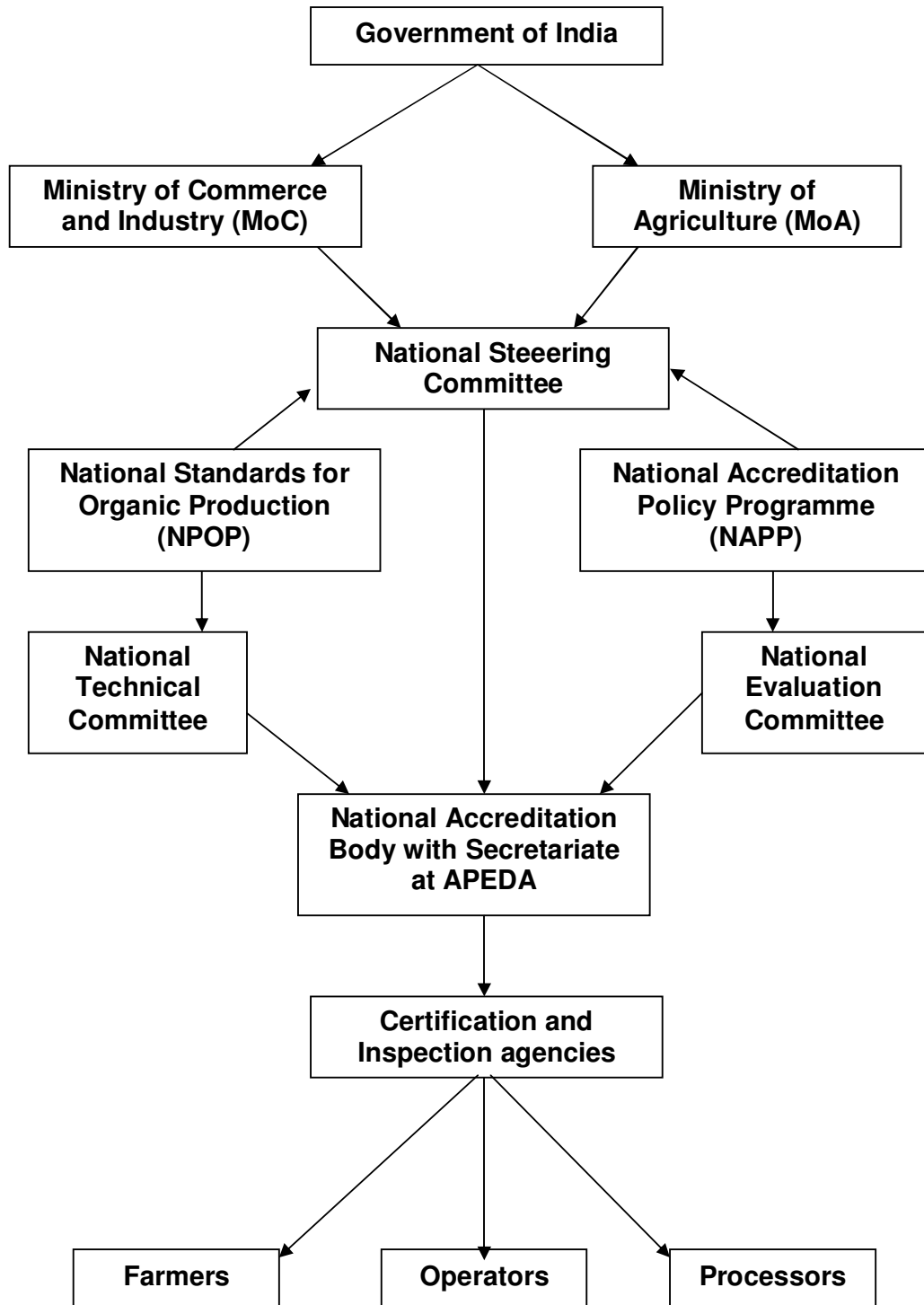
Accredited Inspection and Certification Agencies

Based on the recommendations of the Evaluation Committee, eligible Inspection and Certification Agencies will be accredited by the National Accreditation Body. These agencies should be well versed with the operating procedures, the NSOP and the international standards. Their programmes should have been in operation for at least one year and they should be able to provide the supporting documents.

Inspectors

The inspectors, appointed by the accredited Inspection and Certification Agencies will carry out inspection of the operations through records maintained by the operators as per specified formats and also by periodic site inspection. Based on compliance with the standards and certification programmes, accredited Inspection and Certification Agencies will certify the organic status of products and operations, specifying their conditions and recommendations.

Operational Structure of National Programme for Organic Production (NPOP)



Chapter 4

NATIONAL STANDARDS FOR ORGANIC PRODUCTION

3.1 CROP PRODUCTION AND ANIMAL HUSBANDRY IN GENERAL

3.1.1 Conversion Requirements

General Principles

Organic agriculture means a process of developing a viable and sustainable agroecosystem. The time between the start of organic management and certification of crops and/or animal husbandry is known as the conversion period. The whole farm, including livestock, should be converted according to the standards over a period of three years.

Recommendations

For a sustainable agro-ecosystem to function optimally, diversity in crop production and animal husbandry must be arranged in such a way that there is an interplay of all the elements of the farming management. Conversion may be accomplished over a period of time. A farm may be converted step by step. The totality of the crop production and all animal husbandry should be converted to organic management. There should be a clear plan of how to proceed with the conversion. This plan shall be updated if necessary and should cover all aspects relevant to these standards. The certification programme should set standards for different farming systems so that they can be clearly separated in production as well as in documentation, and the standards should determine norms to prevent a mix up of input factors and products.

Standards

- 3.1.1.1. The standards requirements shall be met during the conversion period. All the standards requirements shall be applied on the relevant aspects from the beginning of the conversion period itself.
- 3.1.1.2. If the whole farm is not converted, the certification programme shall ensure that the organic and conventional parts of the farm are separate and inspectable.
- 3.1.1.3. Before products from a farm/project can be certified as organic, inspection shall have been carried out during the conversion period. The start of the conversion period may be calculated from the date of application of the certification programme or from the date of last application of unapproved farm inputs provided it can demonstrate that standards requirements have been met from that date of implementation. For the length of conversion periods, please refer to sections 3.2.2 and 3.3.2.
- 3.1.1.4 Simultaneous production of conventional, organic in conversion and/or organic crops or animal products which cannot be clearly distinguished from each other, will not be allowed.

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

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

3.1.2 Maintenance of Organic Management Standards

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

3.1.3 Landscape

The certification programme shall set standards for a minimum percentage of the farm area to facilitate biodiversity and nature conservation.

Standards

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

3.2 CROP PRODUCTION

3.2.1 Choice of Crops and Varieties

Standards

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

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

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

3.2.2 Duration of Conversion Period

Standards

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

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

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

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

3.2.3 Diversity in Crop Production Standards

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

3.2.4 Fertilisation Policy Standards

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

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

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

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

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

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

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

3.2.4.8. The certification programme shall lay down restrictions for the use of inputs such as mineral potassium, magnesium fertilisers, trace elements, manures

and fertilisers with a relatively high heavy metal content and/or other unwanted substances, e.g. basic slag, rock phosphate and sewage sludge (Appendix I).

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

3.2.5 Pest, Disease and Weed Management including Growth Regulators Standards

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

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

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

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

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

3.2.5.6 The use of synthetic growth regulators and synthetic dyes are prohibited.

3.2.5.7. The use of genetically engineered organisms or products are prohibited.

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

3.2.6 Contamination Control Standards

3.2.6.1. In case of reasonable suspicion of contamination, the certification programme shall make sure that an analysis of the relevant products to detect the possible sources of pollution (soil and water), shall take place to determine the level of contamination.

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

3.2.7 Soil and Water Conservation Standards

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

3.2.7.2 The clearing of primary forest is prohibited.

3.2.7.3. Relevant measures shall be taken to prevent erosion.

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

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

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

3.2.8 Collection of Non Cultivated Material of Plant Origin and Honey Standards

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

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

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

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

3.3 ANIMAL HUSBANDRY

3.3.1 Animal Husbandry Management

Standards

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

- Sufficient free movement
- Sufficient fresh air and natural daylight according to the needs of the animals
- Protection against excessive sunlight, temperatures, rain and wind according to the needs of the animals
- Enough lying and/or resting area according to the needs of the animal. For all animals requiring bedding, natural materials shall be provided.
- Ample access to fresh water and feed according to the needs of the animals

- Adequate facilities for expressing behaviour in accordance with the biological and ethological needs of the species.

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

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

- The specific farm or settlement structure prevents such access provided animal welfare can be guaranteed
- Areas where feeding of animals with carried fresh fodder is a more sustainable way to use land resources than grazing, provided animal welfare is not compromised.
- Restrictions shall always include a time limit which shall be set for each exception.
- Poultry and rabbits shall not be kept in cages.
- Landless animal husbandry systems shall not be allowed.

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

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

3.3.2 Length of Conversion Period Standards

3.3.2.1. Animal products may be sold as "product of organic agriculture" only after the farm or relevant part of it has been under conversion for at least twelve months and provided the organic animal production standards have been met for the appropriate time.

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

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

3.3.3 Brought-in Animals Standards

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

- 2 day old chickens for meat production
- 18 week old hens for egg production
- 2 week old for any other poultry

- piglets up to six weeks and after weaning
- calves up to 4 weeks old which have received colostrum and are fed a diet consisting mainly of full milk.

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

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

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

3.3.4 Breeds and Breeding Standards

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

3.3.4.2. Artificial insemination is allowed.

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

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

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

3.3.5 Mutilations Standards

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

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

Suffering shall be minimised and anaesthetics used where appropriate.

3.3.6 Animal Nutrition Standards

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

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

3.3.6.3. For the calculation purpose only, feed produced on the farm unit during the first year of organic management, may be classed as organic. This refers only to feed for animals which are themselves being reared within the farm unit and such feed may not be sold or otherwise marketed as organic (as 4.2.4).

3.3.6.4. Where it proves impossible to obtain certain feeds from organic farming sources, the certification programme shall allow a percentage of feed consumed by farm animals to be sourced from conventional farm. The maximum percentages of such feeds are given in the following table and shall be calculated in terms of the average diet for each animal category. These maximum percentages shall be followed the whole year round:

Ruminants (dry matter intake) 15%

Non-ruminants (dry matter intake) 20%

These percentages will be reduced within 5 years to

Ruminants (dry matter) 10%

Non-ruminants (dry matter) 15%

The certification programme shall allow exceptions to these percentages, with specific time limits and conditions in the following cases:

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

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

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

This covers both organic and conventional feeding stuffs.

3.3.6.6. Vitamins, trace elements and supplements shall be used from natural origin when available in appropriate quantity and quality. The certification

programme shall define conditions for use of vitamins and minerals from synthesised or unnatural sources.

3.3.6.7. All ruminants shall have daily access to roughage.

3.3.6.8. The following fodder preservatives shall be used:

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

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

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

3.3.6.10. Young stock from mammals shall be raised using systems which rely on organic milk, preferably from their own species. In emergencies the certification programme shall allow the use of milk from non-organic farming systems or dairy based milk substitutes so long as they do not contain antibiotics or synthetic additives.

3.3.7 Veterinary Medicine Standards

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

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

3.3.7.3. Use of the following substances is prohibited :

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

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

Genetically engineered vaccines are prohibited.

3.3.8 Transport and Slaughter

Standards

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

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

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

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

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

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

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

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

3.3.9 Bee Keeping

Standards

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

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

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

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

3.3.9.5. Wing clipping is not allowed

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

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

- caustic soda
- lactic, oxalic, acetic acid
- formic acid
- sulphur
- etheric oils
- *Bacillus thuringiensis*

3.4 FOOD PROCESSING AND HANDLING

Standards

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

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

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

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

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

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

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

Ethylene gas is permitted for ripening.

3.4.2 Pest and Disease Control

Standards

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

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

Irradiation is prohibited.

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

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

3.4.3 Ingredients, Additives and Processing Aids Standards

3.4.3.1. In cases where an ingredient of organic agriculture origin is not available in sufficient quality or quantity, the certification programme may authorise use of non organic raw materials subject to periodic re-evaluation. Such non-organic raw material shall not be genetically engineered.

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

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

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

3.4.3.5. Preparations of micro-organisms and enzymes commonly used in food processing may be used, with the exception of genetically engineered micro-organisms and their products.

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

3.4.4 Processing Methods Standards

3.4.4.1. The following kinds of processes are approved :

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

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

3.4.4.3. Irradiation is not allowed.

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

3.4.5 Packaging Standards

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

3.5 LABELLING Standards

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

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

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

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

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

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

3.5.1.6. All raw materials of a multi-ingredient product shall be listed on the product label in order of their weight percentage. It shall be apparent which raw materials are of organic certified origin and which are not. All additives shall be listed with their full name. If herbs and/or spices constitute less than 2% of the total weight of the product, they may be listed as "spices " or "herbs " without stating the percentage.

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

3.6 STORAGE & TRANSPORT

Standards

- 3.6.1 Where only part of the unit is certified and other products are non-organic, the organic products should be stored and handled separately to maintain their identity.
- 3.6.2 Bulk stores for organic product should be separate from conventional product stores and clearly labeled to that effect.
- 3.6.3 Storage areas and transport containers for organic product should be cleaned using methods and materials permitted in organic production. Measures should be taken to prevent possible contamination from any pesticide or other treatment not listed in Appendix – 2.

Chapter 5

Inspection and Certification Process

Inspection and Certification agency

Authorization of Inspection and certification agency

The National Accreditation Body (NAB) is responsible for giving approval on the authorization of an applicant Inspection and Certification Agency. Before approval, the NAB satisfies itself that the applicant Inspection and Certification Agency meets all the requirements necessary for authorization.

Authorization status is awarded only for the certification of categories of production and processing covered by these Rules.

On approval given by NAB, the APEDA issues a Certificate of Authorization, containing at least the following details:

- (a) Certificate of Authorization Number;
- (b) The name and address of the Inspection and Certification Agency;
- (c) The nature of the activities covered;
- (d) The date of issue and date of expiry;

Annual Surveillance and Review of Inspection and Certification Agencies:-

- (1) The Authorized Inspection and Certification Agency submit an annual report covering the turnover (financial and staff), number of projects certified, under certification and products exported in terms of quantity and value to the APEDA. This annual report also contain an updated report on recent developments in the Inspection and Certification Agency's Process such as the number of Licensed Operators certified, under conversion, geographical area of operation and changes in personnel, and a compliance report in which compliance with imposed conditions is reported, supported by documentary evidence. The report should also mention any irregularities or infringements found with the Licensed Operators related to the application of the standards.
- (2) The Evaluation Committee (EC) is required to make a review evaluation on the basis of the annual report and recommend measures and action to be taken to the APEDA for placing the same before NAB for appropriate decisions.
- (3) Procedures for the review evaluation shall be normally identical to those of the initial evaluation.
- (4) Depending upon whether the Authorized Inspection and Certification Agency has complied with conditions imposed by the NAB, and the extent and nature of changes made in the Authorized Inspection and Certification Agency's Process, the NAB may take any of the following courses of action:
 - (a) Renew the Authorization period if the period has expired;
 - (b) Impose new conditions requiring corrective action according to an agreed Time table;

- (c) Extend the authorization period subject to a full re-evaluation during the ensuing 12 month period or shorter;

Inspection:-

Standard inspection procedures shall be followed by the inspection and certification agencies. The inspector shall have access to all relevant facilities, including accounts and other documentation of the Licensed Operator. The policies and procedures for inspection shall be documented and shall include-

- (a) The basis for assignment of inspectors.
- (b) Grounds for objection to inspection by Licensed Operator.
- (c) Instructions for inspection visits.
- (d) Inspection methods and frequency.
- (e) Inspection requirements.
- (f) Sampling requirements.
- (g) Instructions for preparation of reports.

Assignment:

(a) The inspector shall be assigned by the Authorized Inspection and Certification Agencies. Prior to the assignment of the inspector, the Authorized Inspection and Certification Agency shall-

- i) Ensure sufficient expertise needed for the actual inspection.
- ii) Exclude any possible conflict of interest.

(b) Licensed Operators shall have neither the right to choose nor to recommend inspectors. In case the Licensed Operator wants to change the Authorized Inspection and Certification Agency, they shall inform the APEDA stating the reasons for their decision. APEDA after verifying records from the previous certification body would allow the Licensed Operator to register under a new Authorized Inspection and Certification Agency of its choice.

(c) The Licensed Operators shall have the right to be informed about the identity of the inspector before the inspection visit, and to raise objections related to any potential conflict of interest. This does not apply to unannounced inspections.

(d) Continuous inspection by a single inspector for the same Licensed Operator should be avoided.

(e) The Authorized Inspection and Certification Agency shall apply the precautionary measures during inspection and certification. When an irregularity is committed by the Licensed Operator in, the entire lot or production affected by irregularity will be removed from the production site / chain and sanctions shall be imposed on the Licensed Operator.

(f) The NAB shall be informed about the action taken on the Licensed Operator. In case the NAB, finds irregularities or infringements related to application of this regulation by the inspection and certification agencies, it shall take further action under these Rules.

Inspection Visit and Report:

Sufficient information shall be made available to the inspectors about the Licensed Operator to allow proper preparation by the inspector. This includes, among others, earlier inspection findings, a description of activities/processes, maps/plans, product specifications, and used inputs, earlier irregularities, infringements, conditions and disciplinary measures. The visit and the questionnaires used during the inspection, and the reports emanating from the inspection, shall be comprehensive, covering all relevant aspects of the production standards and shall adequately validate the information provided. Authorized Inspection and Certification Agencies shall have access to any non-organic production unit, or units associated by ownership or management. Inspection, including document review, should include such units when there is sufficient reason for doing so, such as production of the same kind of products etc. Inspection reports and inspection shall, as far as possible, follow a specified protocol to facilitate a non-discriminatory and objective inspection procedure. Reports shall be designed to allow for elaboration and analysis by the inspector on areas where compliance might be partial, standards might not be clear etc. Inspection reports shall give adequate information on what was actually checked, including, but not restricted to-

- (a) date and time of inspection,
- (b) persons interviewed,
- (c) crops/products requested for certification,
- (d) fields and facilities visited,
- (e) documents reviewed,
- (f) In addition the report shall contain:
- (g) inspector's observations,
- (h) evaluation of compliance to standards, and certification requirements.

Methods and Frequency:

Inspection methods and frequency shall be determined by, among others-

- (a) Intensity of production.
- (b) Type of production.
- (c) Size of operation.
- (d) Outcome of previous inspections and the Licensed Operator's record of compliance.
- (e) Any complaints received by the Inspection and Certification Agency.
- (f) Whether the unit or Licensed Operator is engaged only in certified production
- (g) Contamination and drift risk.
- (h) Complexity of production.

Inspection frequency:

The Authorized Inspection and Certification Agencies shall have a written policy on inspection frequency and it shall interalia include-

- (a) Inspection of Licensed Operators shall take place at least once annually.
- (b) Inspection of sub-contracted Licensed Operators shall take place at least once annually.

- (c) A minimum number (percentage) of unannounced inspections to be carried out and the number shall be determined along with the basis for selection of the Licensed Operators to be subject to such inspections.
- (d) The manner in which the cost of "extra" inspection is to be borne.
Timing of inspections shall not be so regular as to become predictable.

Inspection methods:

Inspections shall regularly include, but are not restricted to:

- (a) Visits of facilities, fields, etc.
- (b) Review of records and accounts.
- (c) Calculation of input/output norms, production estimates etc.
- (d) Assessment of production system of Licensed Operator.
- (e) Interview with responsible persons.

Analysis and Residue Testing:

Testing is a major instrument for organic certification, provided it is done by competent institutions approved as per ISO 17025 having appropriate facilities for quality testing. The testing laboratory shall have operating manuals and procedures for residue testing of pesticides, heavy metals and other prohibited substances. The Authorized Inspection and Certification Agencies shall have documented policies and procedures on residue testing, genetic testing and other analysis. These policies, must, interalia, include:

- (a) Identification of cases in which samples shall be taken for analysis where, use of a substance prohibited by the standards, is suspected.
- (b) Indication of any random sampling requirements.
- (c) Instructions to the inspectors on sampling requirements and methods.
- (d) Post-sampling procedures.
- (e) fixation of responsibility for payment of sampling.

Inspection Regime for Part Conversion and Parallel Production:

- (a) Part conversion is the stage or situation when conventional, in conversion and/or organic production or processing occur in the same unit.
- (b) Parallel production is defined as any production where the same unit is growing, breeding, handling or processing the same products both of certified organic quality and of non-certified organic quality. A situation where "organic" and "in-conversion" production of the same product is carried out, is also parallel production.

Provisions for part conversion in production and processing:

The Authorized Inspection and Certification Agencies shall develop special inspection regimes when part conversion occurs. Certification in situations of part conversion may only be granted when there is a system to safeguard the products against being mixed or contaminated.

The Authorized Inspection and Certification Agencies shall ensure:

- i) that appropriate storage capacity exists to ensure separate handling;
- ii) that the documentation regarding the production is well managed and makes a clear distinction between certified and not certified production;

- iii) that inspections are carried out at critical times;
- iv) that inspection is done in a timely manner;
- v) that accurate production estimates are available.

Provisions for parallel production:

- (a) If a farm is engaged in parallel production, the Authorized Inspection and Certification Agency shall ensure, in addition to the requirements for part conversion, the following: -
 - i) buffer zones are maintained for demarcation
 - ii) crops are visually distinguishable or
 - iii) the crops are harvested in such a way that there are reliable methods to verify the actual harvest of the respective crops (inspections between harvests, extra inspections during harvests).
- (b) Such a system shall be approved by the Authorized Inspection and Certification Agency for each individual situation.

If parallel production is allowed in animal husbandry and bee keeping, the Authorized Inspection and Certification Agency must develop documented procedures and inspection regimes appropriate for that kind of production.

Inspection for Use of Genetically Engineered Products

- (a) The Authorized Inspection and Certification Agencies shall implement a system of inspection for potential use of genetically engineered products. When use of such products is detected at any stage, certification shall not be granted.
- (b) The Authorized Inspection and Certification Agencies shall at least once in a year publish and distribute to all Licensed Operators and inspectors a booklet listing the common name and product name of all known genetically engineered products or of all non-genetically engineered products relevant to the areas of certification.
- (c) Such booklet shall include the following where appropriate to the certification being conducted:
 - i) seeds and planting stock
 - ii) animal breeds
 - iii) production inputs
 - iv) livestock inputs
 - v) processing aids
 - vi) ingredients
- (d) When appropriate, Licensed Operators must be required to retain signed statements from all suppliers verifying that no genetically engineered products were supplied.

Inspections and Certification of Grower Groups:-

- (1) The Inspection and Certification Agency will have documented policies and procedures for carrying out inspection of grower groups.
- (2) Constitution of the Group Organization: The grower group will have a legal status or constitution of the organization and shall be presented by an organizational

- chart. For implementation of the procedures to maintain the internal control system, responsibilities shall be delegated to individual members / committees for carrying out specific activities.
- (3) Internal Quality System (IQS): Group certification is based on the concept of an Internal Quality System comprising of the following: -
 - (a) Implementation of the internal control system
 - (b) Internal standards
 - (c) Risk assessment.
 - (4) An external inspection and certification body should be identified for conducting annual inspection of the individual group / unit. The external inspection agency shall evaluate by checking the IQS documentation, staff qualifications and re-inspecting some farms.
 - (5) Development of IQS: The following are the minimum requirements for setting up an IQS for grower groups: -
 - (a) Development of Internal Control System (ICS)
 - (b) Identification of producer groups
 - (c) Creation of awareness about group certification
 - (d) Identification of qualified personnel for maintaining the internal control system
 - (e) Give necessary training in production and IQS development
 - (f) Preparation of IQS manual containing policies and procedures
 - (g) Implementation of the policies and procedures
 - (h) Review and improvement of the IQS document for maintaining a harmonized IQS.
 - (6) Internal Quality System Manager (IQS Manager):
 - (a) IQS manager shall develop and implement the IQS and would be responsible to organize internal inspections, coordinate between field staffs, approval staff, and the external inspection agency. The IQS manager shall have defined procedures to approve or sanction farmers.
 - (b) The responsibility of IQS manager shall be to ensure that all the standards requirements are fully implemented by the group.
 - (7) Internal inspectors: Adequate number of internal inspectors shall be identified from within the group. The inspectors shall be qualified and well versed with the standards to perform internal inspections.
 - (8) Approval Manager / Committee: Qualified person or approval committee shall be designated from within the group to take the approval decision. The approval manager/committee shall be well versed with organic procedures of IQS, internal standards and Organic Agricultural.
 - (9) Field officers: Field officers should be identified among the group, one at each production area. The field officer shall train the farmers by organizing field extension services.
 - (10) Purchase officers: Purchase officers shall be identified who would be responsible for correct purchase of produce from the farmers. The purchase officer is required to be well versed with IQS.

- (11) Warehouse Manager: If there are separate warehouses, it may be necessary to have a warehouse manager who would be responsible for handling the produce. He / she shall be well versed with the procedures of IQS for proper implementation.
- (12) Processing Manager: If a processing unit is operated by the IQS Licensed Operator, it may be necessary to assign a processing manager. The processing manager is required to be trained in the handling procedures. When the processing of the produce is being organized in a company, the latter needs to be inspected by the certifier and would be responsible for processing according to the internal handling rules. In such case, the processing unit shall have a formal contract with the grower group.
- (13) Internal Standards: The internal standards shall be prepared in local language by the IQS manager for the region of operations under these Rules. If the farmers are illiterate, the internal standards shall contain illustrations in the text for better understanding. The internal standards would contain: -
- (a) Definition of production unit
 - (b) How to deal with part conversion
 - (c) Conversion period
 - (d) Farm production norms for the entire production unit (seeds, nutrient management, pest management, soil management, approved inputs, prevention of drifts, livestock husbandry management)
 - (e) Harvest and post harvest procedures
- (14) Conflict of Interest: The IQS personnel shall not have any conflict of interest that might hinder the work. All possible conflicts shall be declared in a written statement. In such cases, the IQS shall ensure that alternative solutions are found.
- (15) Scope of Certification: The certification shall be granted to the group with reference to the regulations / standards adopted by the group.
- (16) Trade: The group will market the products under a single entity. For trading the products from the group of producers, the IQS shall draw up relevant procedures.

Procedures for Implementation of Internal Control System:-

- (1) Registration of members: All members of the group will be formally (legally) registered under a single entity.
- (2) Provision of documents to the members of the grower group: Each member of the grower group will be supplied with docket in local languages, which will contain the following –
 - (a) Copy of IQS manual
 - (b) Internal standards document
 - (c) Copy of National Standards of Organic Production document (Each member / staff shall be communicated when there is a revision in the standards.)
 - (d) Definition of the production unit
 - (e) Farm Entrance Form (farm data sheet), including last use of prohibited inputs

- (f) Field records (main cultivation measures, use of inputs, harvested quantities, post harvest procedures): remark: may be included in internal farm checklist.
 - (g) Prevailing farming system and package of practices available for the area
 - (h) Details and description of the various steps required for the process flow right from cultivation to harvest and sales of the products.
 - (i) Written contract (for formal commitment) of each grower within the group
 - (j) Annual farm inspection checklist
 - (k) Information on training process and provision of advisory services by the field officers.
- (3) Operating Document: The quality manager shall prepare the operating document, which shall be followed by all the members of the group. The operating document will contain the following: -
- (a) An overview map (village or community map) showing location of each member's production unit. The map should indicate the crops cultivated in rotation and also mark any farm in an area, which could be identified as high risk due to drift from non-conventional farms.
 - (b) Farmer's list with code and name of the farmer, total area, area under crop (or number of plants), date of registration with the group, date of last use of forbidden products, date of internal inspection, name of internal inspector, result of internal inspection (separate lists for in-conversion farmers)
 - (c) List of farmers who have been issued sanctions with the reason and the duration of the sanction (if relevant).
 - (d) The risk shall be assessed by IQS manager for the grower group every year. The risk assessment should be made at the farm level, processing, transporting and during trade. The IQS will take all measures to minimize the identified relevant risks.
- (4) Critical control points for risk assessment:
- (a) Measures taken by the farmers to deal with part conversion (if farmers still grow some non-organic crops).
 - (b) Conversion period
 - (c) Production rules for the whole production unit,(seeds, fertilization and soil management, pest management, approved inputs, prevention of drifts, animal husbandry).
 - (d) Harvest and post harvest procedures.
 - (e) Processing and handling standards
- (5) Internal Inspections:
- (a) At least two inspections of the group (one in growing season of each crop) shall be carried out by the internal inspector and will be documented.
 - (b) The inspection will be carried out in presence of the member or his representative and must include a visit of the whole farm, storage of inputs, harvested products, post harvest handling and animal husbandry.
 - (c) The internal inspector will also verify if the internal standards have been followed and whether the conditions of the previous internal inspection have been fulfilled.
 - (d) The visit of the internal inspector will be documented in the farm inspection checklist duly signed by the inspector and counter-signed by the member or his representative.

- (e) In case of severe non-compliance, the results will be reported immediately to the IQS manager and all measures will be taken according to the internal sanction procedures.
- (6) External Inspections: The external Inspector will re-inspect some of the farms for the evaluation of the grower group for efficient internal control system for compliance with these Rules.
- (7) The sampling plan for inspection shall be based on the inspector's perception of risk based on the following factors:
 - (a) Size of holding
 - (b) Number of the members in the group
 - (c) Degree of similarity between the production system and crop system
 - (d) Inter-mingling / contamination
 - (e) Local hazards

Certification Process:-

The Responsible Body and Certification Decisions:

- (a) Certification decisions are not only limited to initial approval of Licensed Operators, but also approval of products, changes in production, disciplinary measures etc.
- (b) The Authorized Inspection and Certification Agencies shall ensure that each decision on certification is taken by person(s) different from those who carried out the inspection or assessment.
- (c) The agency responsible for certification decisions shall reflect a diversity of stakeholders, without any single interest predominating.
- (d) Where certification decisions are delegated to a small committee or officers, the Authorized Inspection and Certification Agencies shall demonstrate reporting and review functions that enable the agency responsible for certification to exercise ultimate control and responsibility for such decisions.

Exceptions:

If exceptions are granted, clear criteria and procedures for granting exceptions shall be evolved.

- (a) Exceptions shall be clearly limited in time.
- (b) The rationale for any exception shall be properly recorded.

The Certification Process:

The certification policies and procedures shall be well documented and shall, interalia, include:

- (a) all procedural steps in processing the application, until final certification;
- (b) that the certification status of all Licensed Operators and their production be indicated throughout the certification process;
- (c) the procedures for extension and updating certification, including certification of individual products; [Note: The Authorized Inspection and Certification Agencies shall require the Licensed Operator to inform of any changes in production as modification to the products, the manufacturing process, extension of acreage etc. The Authorized Inspection and Certification Agencies shall determine whether the announced changes require further investigations. In that case, the Licensed Operator shall not be allowed to

release certified products resulting from such changes until the Authorized Inspection and Certification Agencies have notified the Licensed Operator accordingly].

- (d) that the certification decisions be recorded and clearly communicated to the Licensed Operator;
- (e) that, where certification is denied, the reasons shall be clearly stated;
- (f) that the Authorized Inspection and Certification Agency shall be able to impose conditions and restrictions. Mechanisms for monitoring compliance with such conditions and restrictions shall be in place.
- (g) that the criteria for the acceptance of applicants, formerly certified by other certification system shall be documented. Relevant records from the other certification system must be requested;
- (h) that, when asked for by the Licensed Operator, relevant records are released to another Authorized Inspection and Certification Agency.
- (i) that processing of inspection reports and certification decision shall be done in a timely manner.
- (j) that processing of any issue related to violations shall be done with highest priority.

Appeals:

- (a) The Authorized Inspection and Certification Agencies shall have procedures for the consideration of appeals against its decisions.
- (b) The Authorized Inspection and Certification Agencies shall:
 - i) keep a record of all appeals
 - ii) take appropriate follow up actions
 - iii) document the action taken
- (c) Persons responsible for the decision being appealed against shall not be involved in the final decision on the appeal.

Certification Records and Reports:

- (a) Licensed Operator's Files: Licensed Operator's files shall be up to date and contain all relevant information, including history and product specifications. The Authorized Inspection and Certification Agencies shall have relevant data available for all certified production units, including any sub-contractors and members of grower groups.
- (b) Inspection reports and written documentation shall provide sufficiently comprehensive information to enable the Authorized Inspection and Certification Agencies to make competent and objective decisions.
- (c) The files shall demonstrate the way in which each certification procedure was applied, including inspection reports and outcome of imposed disciplinary measures.
- (d) The Authorized Inspection and Certification Agencies shall maintain regularly updated lists of all certified production units and of all certified processed products.
- (e) Records: Records shall be kept by respective Authorized Inspection and Certification Agencies for:
 - i) Violations
 - ii) Precedents

- iii) Exceptions
 - iv) Disciplinary measures
- (f) This will normally mean that such information shall be available both in the producer's file as well in a separate record, or registered in a database system.
- (g) Annual report: An annual report shall include details on:
- i) area certified / under conversion
 - ii) the number of inspections performed
 - iii) the number of certified Licensed Operators
 - iv) number of Licensed Operators under conversion
 - v) number of grower groups certified
 - vi) the frequency and kind of violations and disciplinary measures
 - vii) the frequency and kind of exemptions
 - viii) the frequency and kind of complaints
 - ix) the frequency and kind of appeals
 - x) the frequency and kind of infringements found
 - xi) total quantity of organic products produced under the certification system.
 - xii) name of the products / crops certified (processed and non-processed)
 - xiii) quantity of products exported (processed and non-processed)
 - xiv) quantity of products sold in the domestic market (processed and non-processed)
 - xv) number of transaction certificates issued (copies of every transaction certificate to be attached with the report.
 - xvi) other areas of concern.
- (h) Integrity of the System: The certification system shall be based on written agreements, with clear responsibilities of all parties involved in the chain of operations for production of a certified product.
- (i) The Licensed Operators shall sign contracts, agreements or affidavits obliging them inter-alia to:
- i) follow the production standards and other published requirements for certification
 - ii) accept inspections
 - iii) supply accurate information
 - iv) notify the certification process of any changes
- (j) The system shall not allow Licensed Operators to switch in and out of the certification system.
- (k) Disciplinary measures: The Authorized Inspection and Certification Agencies shall have a documented range of disciplinary measures (sanctions) including measures to deal with minor infringements of the standards. A clear procedure for imposing such measures shall be in place. The disciplinary measures applied shall be effective.
- (l) Withdrawal of certification: Where an infringement that affects the organic integrity is found, the Authorized Inspection and Certification Agencies shall ensure that the indication of certification is removed from the entire lot of the production run which is affected by the infringement concerned. Where a violation is made by the Licensed Operator, the Authorized Inspection and Certification Agencies shall withdraw certification from the Licensed Operator for

a specified period and inform about their decision to Agricultural Marketing Adviser.

- (m) Marks and Certificates: The Authorized Inspection and Certification Agencies shall exercise proper control over the use of its Licenses, certificates and certification marks. Incorrect references to the certification system or misleading use of licenses, certificates or marks shall be dealt with by suitable disciplinary actions. The Authorized Inspection and Certification Agencies shall have documented procedures for withdrawal and cancellation of contracts, certificates and certification marks.
- (n) Certificate of registration / Scope Certificate: The Certificate of Registration shall include:
 - i) Name and address of the Licensed Operator
 - ii) Name and address of the Inspection and Certification Agency and authorization number
 - iii) Reference to the applicable standards
 - iv) Products or product categories
 - v) Date of issue
 - vi) Validity
- (o) Transaction certificate: The Authorized Inspection and Certification Agencies may issue transaction certificates only if the seller provides all the required details. The Authorized Inspection and Certification Agencies shall take reasonable measures to verify that the information provided is correct before issuing the certificate. The Authorized Inspection and Certification Agencies shall take adequate measures, including ensuring that certificates contain sufficient information, to prevent fraudulent usage. Copies of all export certificates and transaction certificates issued shall be sent to Agricultural Marketing Adviser for records and will also be stored in a manner that enables easy retrieval and inspection of information on each Licensed Operator.
- (p) Product certificate: The certifier on request of the Licensed Operator will issue product certificate to the buyer, at a cost to be borne either by the Licensed Operator or the buyer. Product certificate shall contain the following:
 - i) The name and description of the seller
 - ii) The name and description of the buyer
 - iii) The date of delivery of the product
 - iv) The date of issuing of certificate
 - v) A clear indication of the product, its quantity and wherever applicable, the quality and season thereof
 - vi) Lot numbers and other identification (marks) of the products
 - vii) Reference to invoice or bill of lading
 - viii) An indication of the Authorized Inspection and Certification Agency and the applicable standard
 - ix) A statement from the certifier that the product is produced according to the applicable standards

- (q) Wherever applicable, the original certification of raw materials, and any other certification from another system shall be indicated on product certificates.
- (r) Copies of transaction certificates issued to Licensed Operators shall be stored in a manner that enables easy retrieval of information on each Licensed Operator.

Licensed Operators:-

- (1) Information to the Licensed Operators: The Inspection and Certification Agencies shall ensure that each certified Licensed Operator has at the time of application:
 - (a) An up-to-date version of the applicable standards for organic products.
 - (b) An adequate description of the procedure for inspection, certification and appeals.
- (2) For the existing Licensed Operators:
 - (a) Notification of changes in the standards and relevant procedures without undue delay.
 - (b) A valid certificate or other written proof of certification status.
 - (c) Valid contracts/licenses.
- (3) The Licensed Operators shall have the right to get copies of inspection findings and other documentation related to the certification of their production, unless the documents are confidential such as filed complaints, confidential section of inspection reports.
- (4) Records and Documentation Maintained by the Licensed Operator: The Authorized Inspection and Certification Agencies should require that each Licensed Operator has a record keeping system adapted to the type of production that enables the Authorized Inspection and Certification Agencies to retrieve necessary information and to seek verification of the production, storage, processing, purchase and sales.

Inspection and Certification of All Stages in Handling:-

- (1) The following applies to inspection and certification of the whole production chain, and clarifies what is applicable for various special cases:-
 - (a) Each step in the handling of a product shall be inspected, at least once annually.
 - (b) This means that not only the farmers but also the storage units, the processing units, packaging, shipment etc. shall be inspected. Any exceptions to this shall be based on a documented risk assessment and be restricted to situations as identified in these criteria.
 - (c) Any person who sells a product (raises invoice) shall be registered and certified.
 - (d) Normally this applies until the product is in its final package/has its final label.
- (2) Packed Products: The Authorized Inspection and Certification Agencies are not obliged to have a system for inspection of products that are further handled after being packed in the final consumer package, and/or after issuing of a transaction certificate. The Authorized Inspection and Certification Agencies are however, obliged to take action where there is reason to believe that the

standards have been or may be violated at such later stages. Examples of such situations could be fumigation in harbours etc.

- (3) Storage Facilities: Depending on the kind of storage, the product, packing, prevailing storage practices (fumigation) and the time of storage, inspections may be required. Authorized Inspection and Certification Agencies shall conduct a risk assessment to determine future need for inspection for all storage facilities including port facilities.
- (4) Transport Facilities: Transport is normally not certified as such, but remains under the responsibility of the party owning the product during the transport.
- (5) Chain of Custody: The Authorized Inspection and Certification Agency shall not issue any license to use its certification mark or issue any certificate for any products unless it is assured of the chain of custody of the product where steps in the production chain have been certified by other Authorized Inspection and Certification Agencies under these Rules.

Inspection and Certification of Wild Products:-

- (1) These criteria only apply for the Authorized Inspection and Certification Agencies that certify wild production as defined with these Rules. All relevant criteria apply to the inspection and certification of wild production. The collectors are normally not subject to requirements similar to those of a farmer in a grower group, though the integrity of the system shall be guaranteed.
- (2) The responsible Licensed Operator shall be dealt with as any other certified party. The Licensed Operator shall issue instructions to the collectors, that at least:
 - (a) defines the area of collection
 - (b) informs them about the standards and other requirements for certification
- (3) The collectors shall sign statements that they have followed the instructions. The Licensed Operator shall have records of all collectors, and the quantities bought from each collector. The area of production shall be properly identified on appropriate maps, which shall be large and distinct enough to reduce the risk of mixing up with non-certified production. Any local agents (middlemen) must be properly contracted by the Licensed Operator.
- (4) The inspection regime shall, apart from normal inspection, visit to the Licensed Operator and the facilities, including:
 - (a) interviews with the collectors.
 - (b) Visit to an appropriate portion of the certified area.
 - (c) visits to and interviews of any local agents.
 - (d) interviews of landowners and other parties (environment agencies, NGOs etc.) supplying relevant information about the area of collection.

Inspection and Certification of Input Manufacturing:-

- (1) Approval Systems: Where the Authorized Inspection and Certification Agencies issue lists or in any other way approve products without formal certification, it shall document at least the following measures:

- (a) the application procedure, including the necessary documents to be submitted by the applicant;
 - (b) the procedure to be followed in evaluating the product's compliance with the organic standards;
 - (c) the decision making authority;
 - (d) the period for which approval is granted and the requirements for the manufacturer to report changes in composition or other relevant factors;
 - (e) a clear statement of the nature and guarantee of the approval.
- (2) The Authorized Inspection and Certifying Agencies shall not receive any endorsement payments. Approval systems shall allow for indication of the approval on the product itself.

Mandatory checks to be undertaken by the Authorized Inspection and Certification Agency during Inspection:-

For conversion to organic cultivation

- (a) The conversion plan and the measures referred by the Licensed Operator are to be checked by the inspector before approval by the Authorized Inspection and Certification Agency. Approval must be confirmed every year after the initiation of the conversion plan.
- (b) The inspector should check that the above conditions are met in the case of production of seeds, vegetative propagating material and transplants. For the production of perennial crop products (fruit growing, vines) the following should be checked for meeting the conditions for compliance: -
 - i) Whether production area is a part of the conversion plan
 - ii) To check that whether the last part of the area in the farm would be converted to organic production in the shortest possible period (not to exceed a maximum of 5 years).
 - iii) Appropriate measures are taken by the Licensed Operator for the separation of the products obtained from organic and non-organic units.
- (c) The conversion plan proposed by the Licensed Operator should be signed with an undertaking that he / she shall perform all the operations, shall comply with these Rules.

Plants and plant products at production site:

- (a) Shall ensure that the Licensed Operator shall inform in advance the Authorized Inspection and Certification Agency regarding harvest of every crop in the farm.
- (b) Shall also ensure that after completion of the harvesting process, the Licensed Operator shall inform the Inspection and Certification Agency about the total quantity harvested on the units concerned. Any distinguishing features observed for demarcation of organic produce from non-organic produce (such as quality, colour, average weight, etc.) shall also be informed.
- (c) In case an Licensed Operator runs several production units in the same area, with non-organic crops or crop products, the inspector should also inspect the storage area of non-organic input products (such as fertilizers, plant protection products, seeds etc.).

- (d) Whether the farms and storage units are separated from non-organic farms and non-organic storage units.

Processing and packaging units of organic products can be considered as part of the production unit, when processing & packaging activities take place at the production site.

- (e) On suspicion of use of unauthorized products, samples for testing of products (products as well as inputs used) must be taken.

For collection of wild products:

- (a) When the Licensed Operator's activity is limited to only collection of wild products, the Inspection and Certification Agency must take all the precautionary measures to ensure compliance with the provisions under Organic Agricultural Produce Grading and Marking Rules.
- (b) The inspector should countercheck to ensure that the guarantees given by the producer meet the provisions.
- (c) Measures taken by the Licensed Operator for compliance with these Rules must be checked and noted.

Records / documentation:

- (a) The records /files maintained by the Licensed Operator should be checked by the inspector to trace the origin, nature and quantities of all raw materials purchased.
- (b) To verify the application of all the inputs used are documented.
- (c) Written or documentary receipts / accounts must be checked for the quantities and consignees of all agricultural products sold by the Licensed Operator. (Quantities sold directly to the buyer should also be accounted on a daily basis by the Licensed Operator).

Inspection of input storage units:

Storage area of organic inputs used in production should also be inspected and verified (allowed / restricted as schedule III and IV).

Transportation:

Transportation units should be checked for confirming that the organic products are transported to other units, including wholesalers and retailers, in appropriate closed containers or packaging with a proper label.

Inspection for production of agricultural products and processed food stuffs composed of plant origin:

- (a) Undertaking from the Licensed Operator to perform the operations in such a way as to comply with Organic Agricultural Produce Grading and Marking Rules.
- (b) Check the facilities available for the processing, packaging and storage of agriculture products before and after the operations.
- (c) Check whether the unit has separate areas within the premises for the storage of products, before and after the operations.
- (d) Whether the operations must be carried out continuously until the complete run is over for organic products and are separated from similar operations performed for non-organic products (place and time of Licensed Operators to be checked).

- (e) To ensure that if such operations are not carried out frequently, the Authorized Inspection and Certification Agency shall be informed in advance, for a particular day & time.
- (f) Samples for testing of products should be taken. However, they must be taken where the use of unauthorized products is suspected.
- (g) Written documents must be checked for enabling the inspector:
 - i) to trace the origin, nature and quantities of certified agricultural products delivered to the unit, nature, quantities and consignees of certified products left the unit, any other information, such as the origin, nature and quantities of ingredients, additives and manufacturing aids delivered to the unit, composition of processed products and processed, packaged or stored non-organic products in the unit concerned.
 - ii) to check that measures taken by the Licensed Operator for identification of organic products (lots) from non-organic products.
 - iii) to check that products are transported to other units, (including wholesalers and retailers) in appropriate packaging or closed containers to prevent contamination or substitution of non-organic products.
 - iv) to check that the products were checked for the label on the packaging or container by the Licensed Operator and have been mentioned in the records.

Inspection report :

- (a) The report shall give a full description of the farms / units, collection areas highlighting the storage, processing, production and packaging operations
- (b) The report shall also mention the date and time of last application of inputs on the farm / unit or collection areas (reference to the restricted / prohibited inputs in schedules-III and IV under these Rules).
- (c) The report shall highlight conditions / sanctions any to be imposed for certification.
- (d) In the event of suspicion of any infringement by the Licensed Operator, the inspector shall clearly mention in his report.

The inspection report shall be prepared after every visit by the inspector and should be countersigned by the responsible person of the unit inspected.

Grant of Certification

1. If the Authorized Inspection and Certification Agency, after a preliminary inquiry, and thorough inspection is satisfied that the applicant having regard to requisite skill, resources, production, processing previous performance and antecedents relevant to the issuance of the License is fit to use the Certification Mark, the Authorized Inspection and Certification Agency shall grant a License in prescribed form authorizing the use of the Certification Mark in respect of the product or class of products manufactured by the applicant in respect of the process employed in any production, manufacture or work, subject to such terms and conditions as specified in these Rules. The Authorized Inspection and Certification Agency shall intimate the applicant about grant of License.

2. The Applicant shall be entitled to use the certification or grade designation mark as provided under these Rules and restrict his use thereof to goods or services, which will meet the norms and standard specification of the products. The certification mark may be affixed to the products and/or used on packaging or promotional material or in the context of advertising activities.
3. In the event of a withdrawal of the right to use the aforesaid Mark the License shall be returned to the Authorized Inspection and Certification Agency. The right to use the grade designation mark expires at the same time without giving rise to any indemnification claim against NAB and/or Authorized Inspection and Certification Agency.
4. The Applicant is entitled to the aforesaid Mark but shall be answerable for the safety of their products themselves. They shall furnish proof of holding sufficient product liability insurance in respect thereof, if required by the Authorized Inspection and Certification Agency. No liability whatsoever will be accepted by the Authorized Inspection and Certification Agency or NAB.
5. Where the application for a License is made by a person, whose License is cancelled by the Authorized Inspection and Certification Agency due to furnishing of incorrect information or use of the Standard or Certification/ Grade Designation Mark in relation to any other product to deceive the public, he shall not be eligible to apply for a period of six months from the date of such cancellation. The period of disqualification shall be determined by Authorized Inspection and Certification Agency having regard to the facts and circumstances of each case and it shall not exceed a period of one year.
6. A License shall be granted on prescribed form for a period of one year and a declaration by Licensed Operator shall be given on prescribed form.
7. The Authorized Inspection and Certification Agency may, during the period of the validity of the License, alter by giving one month's notice to a Licensed Operator any terms and conditions subject to which the License has been granted.
8. Where Authorized Inspection and Certification Agency, after a preliminary inquiry, is of the opinion that a License should not be granted, the Authorized Inspection and Certification Agency shall give a reasonable opportunity to the applicant of being heard, either in person or through a representative authorized by him on his behalf, and may take into consideration any fact or explanation urged on behalf of the applicant before rejecting the application.
9. A License shall expire at the end of the period for which it is granted.
10. Particulars of all Licenses issued by Authorized Inspection and Certification Agency under these regulations in connection with the use of the Certification/ Grade Designation Mark shall be entered in a register which will be inspected and evaluated by NAB.

Appendix 1

Products for Use in Fertilising and Soil Conditioning

In organic agriculture the maintenance of soil fertility may be achieved through the recycling of organic material whose nutrients are made available to crops through the action of soil micro-organisms and bacteria. Many of these inputs are restricted for use in organic production. In this appendix "restricted" means that the conditions and the procedure for use shall be set by the certification programme. Factors such as contamination, risk of nutritional imbalances and depletion of natural resources shall be taken into consideration.

1 Matter Produced on an Organic Farm Unit

a.	Farmyard & poultry manure, slurry, urine	Permitted
b.	Crop residues and green manure	Permitted
c.	Straw and other mulches	Permitted

2 Matter Produced Outside the Organic Farm Unit

a.	Blood meal, meat meal, bone meal and feather meal without Preservatives	Restricted
b.	Compost made from any carbon based residues (animal excrement including poultry)	Restricted
c.	Farmyard manure, slurry, urine	Restricted (preferably after control fermentation and/ or appropriate dilution) "factory" farming sources not permitted.
d.	Fish and fish products without preservatives	Restricted
e.	Guano	Restricted
f.	Human excrement	Not allowed
g.	By-products from the food and textile industries of Restricted biodegradable material of microbial, plant or animal origin without any synthetic additives	Restricted
h.	Peat without synthetic additives (prohibited for soil conditioning)	Permitted
i.	Sawdust, wood shavings, wood provided it come from untreated wood	Permitted
j.	Seaweed and seaweed products obtained by physical processes, extraction with water or aqueous acid and/or alkaline solution	Restricted
k.	Sewage sludge and urban composts from separated sources which are monitored for contamination	Restricted
l.	Straw	Restricted
m.	Vermicasts	Restricted
n.	Animal charcoal	Restricted
o.	Compost and spent mushroom and vermiculate substances	Restricted
p.	Compost from organic household reference	Restricted
q.	Compost from plant residues	Permitted
r.	By products from oil palm, coconut and cocoa (including empty fruit bunch, palm oil mill effluent (pome), cocoa peat and empty cocoa pods)	Restricted
s.	By products of industries processing ingredients from organic agriculture	Restricted

3 Minerals

a.	Basic slag	Restricted
b.	Calcareous and magnesium rock	Restricted
c.	Calcified seaweed	Permitted
d.	Calcium chloride	Permitted
e.	Calcium carbonate of network origin (chalk, limestone, gypsum and phosphate chalk)	Permitted
f.	Mineral potassium with low chlorine content (e.g. sulphate of potash, kainite, sylvinite, patenkali)	Restricted
g.	Natural phosphates (e.g. Rock phosphates)	Restricted
h.	Pulverised rock	Restricted
i.	Sodium chloride	Permitted
j.	Trace elements (baron, In, Fe, Mn, molybdenum, Zn)	Restricted
k.	Woodash from untreated wood	Restricted
l.	Potassium sulphate	Restricted
m.	Magnesium sulphate (Epson salt)	Permitted
n.	Gypsum (calcium sulphate)	Permitted
o.	Stillage and stillage extract	Permitted
p.	Aluminum calcium phosphate	Restricted
q.	Sulphur	Restricted
r.	Stone mill	Restricted
s.	Clay (bentonite, perlite, zeolite)	Permitted

4 Microbiological Preparations

a.	Bacterial preparations (biofertilizers)	Permitted
b.	Biodynamic preparations	Permitted
c.	Plant preparations and botanical extracts	Permitted
d.	Vermiculite	Permitted
e.	Peat	Permitted

“Factory” farming refers to industrial management systems that are heavily reliant on veterinary and feed inputs not permitted in organic agriculture

Appendix 2

Products for Plant Pest and Disease Control

Certain products are allowed for use in organic agriculture for the control of pests and diseases in plant production. Many of these products are restricted for use in organic production. Such products should only be used when absolutely necessary and should be chosen taking the environmental impact into consideration. In this Schedule "restricted" means that the conditions and the procedure for use shall be set by the Inspection and Certification Agency.

I. Substances from plant and animal origin

a.	Azadirachta indica [neem preparations (neem oil)]	Restricted
b.	Preparation of rotenone from Derris elliptica, Lonchocarpus, Thephrosia spp.	Restricted
c.	Gelatine	Permitted
d.	Propolis	Restricted
e.	Plant based extracts (e.g. neem, garlic, pongamia, etc	Permitted
f.	Preparation on basis of pyrethrins extracted from Chrysanthemum cinerariaefolium, containing possibly a synergist pyrethrum cinerifolium	Restricted
g.	Preparation from Quassia amara	Restricted
h.	Release of parasite predators of insect pests	Restricted
i.	Preparation from Ryania species	Restricted
j.	Tobacco tea	Not allowed
k.	Lecithin	Restricted
l.	Casein	Permitted
m.	Sea weeds, sea weed meal, sea weed extracts, sea salt and salty water	Restricted
n.	Extract from mushroom (Shiitake fungus)	Permitted
o.	Extract from Chlorella	Permitted
p.	Fermented product from Aspergillus	Restricted
q.	Natural acids (vinegar)	Restricted

II. Minerals

a.	Chloride of lime/soda	Restricted
b.	Clay (e.g. bentonite, perlite, vermiculite, zeolite)	Permitted
c.	Copper salts / inorganic salts (Bordeaux mix, copper hydroxide, Inspection and Certification Agency used as a fungicide, maximum 8 kg per ha per year depending upon the crop and under the supervision of Inspection and Certification Agency	Restricted
d.	Mineral powders (stone meal, silicates)	Not allowed
e.	Diatomaceous earth	Restricted
f.	Light mineral oils	Restricted
g.	Permanganate of potash	Restricted
h.	Lime sulphur (calcium polysulphide)	Restricted
i.	Silicates (sodium silicate, quartz)	Restricted
j.	Sodium bicarbonate	Permitted
k.	Sulphur (as a fungicide, acaricide, repellent)	Restricted

III. Microorganisms / Biocontrol agents

a.	Viral preparations (e.g., Granulosis viruses, Nuclear polyhydrosis, viruses etc.).	Permitted
b.	Fungal preparations (e.g., Trichoderma species etc.)	Permitted
c.	Bacterial preparations (e.g., Bacillus species etc.)	Permitted
d.	Parasites, predators and sterilized insects."	Permitted

IV. Others

a.	Carbon dioxide and nitrogen gas	Restricted
b.	Soft soap (potassium soap)	Permitted
c.	Ethyl alcohol	Not allowed
d.	Homeopathic and Ayurvedic preparations	Permitted
e.	Herbal and biodynamic preparations	Permitted

V. Traps

a.	Physical methods (e.g., chromatic traps, mechanical traps, light traps, sticky traps and pheromones)	Permitted
b.	Mulches, nets	Permitted

Appendix 3

Criteria for the Evaluation of additional inputs to organic agriculture

The following checklist should be used for amending the permitted substance list for fertilizing the soil conditioning purposes:

1. The material is essential for achieving or maintaining soil fertility or to fulfil specific nutrient requirements, for specific soil-conditioning and rotation purposes. and
2. The ingredients are of plant, animal, microbial or mineral origin which may undergo the following processes:
 - a. physical (mechanical, thermal)
 - b. enzymatic
 - c. microbial (composting, digestion) and
3. Their use does not result in, or contribute to, unacceptable effects on, or contamination of, the environment, including soil organisms
4. Their use has no unacceptable effect on the quality and safety of the final product

The following checklist should be used for amending the permitted substance list for the purpose of plant disease or pest and weed control:

1. The material is essential for the control of a harmful organism or a particular disease for which other biological, physical or plant breeding alternatives and/or effective management techniques are not available and
2. The substances (active compound) should be plant, animal, microbial or mineral origin which may undergo the following processes:
 - a. physical
 - b. enzymatic
 - c. microbial and
3. Their use does not result in, or contribute to, unacceptable effects on, or contamination of, the environment.
4. Nature identical products such as pheromones, which are chemically synthesized may be considered if the products are not available in sufficient quantities in their natural form, provided that the conditions for their use do not directly or indirectly contribute to contamination of the environment or the product.

Evaluation

When an input is to be evaluated it must first be investigated by authorized certifying agencies to see whether it fulfils the following six criteria. An input must fulfil all 6 requirements before it can be accepted as suitable for use in organic agriculture.

Inputs should be evaluated regularly and weighed against alternatives. This process of regular evaluation should result in organic production becoming ever more friendly to humans, animals, environment and the ecosystem.

1. Necessity:

The necessity of each input must be established. This will be investigated in the context in which the product will be used. Arguments to prove the necessity of an input may be drawn from such criteria as yield, product quality, environmental safety, ecological protection, landscape, human and animal welfare. The use of an input may be restricted to:

- (1) Specific crops (especially perennial crops)
- (2) Specific regions
- (3) Specific conditions under which the input may be used

2. Nature and Method of Production:

(A) Nature

The origin of the input should usually be (in order of preference):

- (1) Organic - vegetative, animal, microbial
- (2) Mineral

Non-natural products which are chemically synthesized and identical to natural products may be used.

When there is any choice, renewable inputs are preferred. The next best choice is inputs of mineral origin and the third choice is inputs which are chemically identical to natural products. There may be ecological, technical or economic arguments to take into consideration in the allowance of chemically identical inputs.

(B) Method of Production

The ingredients of the inputs may undergo the following processes:

- (1) Mechanical
- (2) Physical
- (3) Enzymatic
- (4) Action of micro-organisms
- (5) Chemical (as an exception and restricted)

(C) Collection

The collection of the raw materials comprising the input must not affect the stability of the natural habitat nor affect the maintenance of any species within the collection area.

3. Environment:

(A) Environmental Safety:

The input must not be harmful or have a lasting negative impact on the environment. Nor should the input give rise to unacceptable pollution of surface or ground water, air or soil. All stages during processing, use and breakdown must be evaluated.

The following characteristics of the input must be taken into account:

(1) Degradability:

All inputs must be degradable to their mineral form.

Inputs with a high acute toxicity to non-target organisms should have a maximum shelf-life of five days.

Natural substances used as inputs which are not considered toxic do not need to be degradable within a limited time.

(2) Acute toxicity to non-target organisms:

When inputs have a relatively high acute toxicity for non-target organisms, restrictions for their use is needed. Measures have to be taken to guarantee the survival of these non-target organisms. Maximum amounts allowed for application may be set. When it is not possible to take adequate measures, the use of the input must not be allowed.

(3) Long-term chronic toxicity:

Inputs which accumulate in organisms or systems of organisms and inputs which have, or are suspected of having, mutagenic or carcinogenic properties must not be used. If there are any risks, sufficient measures have to be taken to reduce any risk to an acceptable level and to prevent long lasting negative environmental effects.

(4) Chemically synthesized products and heavy metals:

Inputs should not contain harmful amounts of man made chemicals (xenobiotic products). Chemically synthesized products may be accepted only if identical to the natural product.

Mineral inputs should contain as few heavy metals as possible. Due to the lack of any alternative, and long-standing traditional use in organic agriculture, copper and copper salts are an exception for the time being. The use of copper in any form in organic agriculture must be seen, however, as temporary and use must be restricted with regard to environmental impact.

4. Human Health and Quality:

(A) Human Health

Inputs must not be harmful to human health. All stages during processing, use and degradation must be taken into account. Measures must be taken to reduce any risks and standards set for inputs used in organic production.

(B) Product quality

Inputs must not have negative effects on the quality of the product (taste, appearance and quality).

5. Ethical Aspects - Animal Welfare:

Inputs must not have a negative influence on the natural behaviour or physical functioning of animals kept at the farm.

6. Socio Economic Aspects:

Consumers' perception: Inputs should not meet resistance or opposition of consumers of organic products. An input might be considered by consumers to be unsafe to the environment or human health, although this has not been scientifically proven. Inputs should not interfere with a general feeling or opinion about what is natural or organic (genetic engineering).

Appendix 4
List of Approved Ingredients as Additives and Processing Aids
Used in Processing of Organic Foods

1 Food Additives and Carriers ¹

Intl Numbering System	Additive/ Processing aid	Used as		Food category	Functions	Limitation / Note
		Additive	Proc. Aid			
INS 170	Calcium carbonate	*	*	GA	Anticaking, acidity regulator, emulsifier, stabiliser	
INS 220	Sulphur dioxide	*	*	W	Preservative, stabiliser	Max. 0.3mg/l
INS 224	Potassium metabisulphite	*	*	W		
INS 270	Lactic acid	*	*	FV, W, MP	Acidity regulator	
INS 290	Carbon-dioxide	*	*	GA	Carbonating agent, packing gas	
INS 296	Malic acid	*	-	FV, MP	Acidulent	
INS 300	Ascorbic acid	*	-	GA	Antioxidant,	
INS 306	Tocopheroles, mixed natural concentrates	*	-	GA	Antioxidant	
INS 322	Lecithin	*	*	GA	Antioxidant, emulsifier, stabilizer	
INS 330	Citric acid	*	-	FV, MP W	Acidity regulator Antioxidant	Restricted 1 gm/l

INS 335	Sodium Citrate	*	-	ME, MP	Acidity regulator Antioxidant	
INS 336	Potassium citrate	*	-	ME, MP	Acidity regulator Antioxidant	
INS 400	Aliginic acid	*	-	FV	Emulsifier, stabiliser, thickener	
INS 401	Sodium alginate	*	-			
INS 402	Potassium alginate	*	-			
INS 333	Calcium citrate	*	-	ME, MP	Acidity regulator Antioxidant	
INS 334	Tartaric acid	*	*	W, MP	Flour treatment, raising agent, emulsifier, antioxidant, preservative	
INS 407 INS 335	Sodium tartrate	*	*	CO, CB		
INS 336	Potassium tartrate	*	*	C, CO, CB		
INS 341	Mono calcium phosphate	*	-	C	Only for raising flour	
INS 342	Ammonium phosphate	*	-	W	-	0.3 gm/l
INS 406	Agar	*	-	MP, F	Emulsifier, Stabiliser Thickner	(Max.0.5%)
INS407	Carrageenan	*	-	MP, F		
INS 410	Locust bean gum	*	-	MP, F		
INS 412	Guar gum	*	-	MP, F		

INS 413	Tragacanth gum	*	-	GA	Emulsifier, Stabiliser Thickner	(Max. 0.5%)
INS 414	Arabic gum	*	-	MP, F		(Max. 0.5%)
INS 415	Xanthan gum	*	-	F, FV, CB		
INS 416	Karaya gum	*	-	MP, F		
INS 440	Pectin(Unmodified form)	*	-	FV, F, CB	Emulsifier, Stabiliser, Thickner	
INS 500	Sodium carbonate	*	*	CO, CB	Acidity regulator, Stabiliser, Anticaking agent, Raising agent	
INS 501	Potassium carbonate	*	*	C, CO, CB	Acidity regulator Stabiliser. For drying grapes	
INS 503	Ammonium carbonate	*	-	C, CO, CB	Acidity regulator Stabiliser, Raising agent	
INS 504	Magnesium carbonate	*	-	C, CO, CB	Acidity regulator Stabiliser	
INS 508	Potassium chloride	*	-	FV	Stabiliser, Thickner	
INS 509	Calcium chloride	*	-	ME, F, FV, SO	Coagulation, firming agent	
INS 516	Calcium sulphate	*	*	CB, SO	Acidity regulator, Stabiliser , Flour treatment, coagulation agent.	Restricted Only in baker's yeast
INS 517	Ammonium sulphate	*		W	Encourage the growth of yeasts	Restricted to 0.3 gm/1
INS 524	Sodium hydroxide	*	*	C, S, Flours & Starches	Acidity regulator, Surface treatment of traditional bakery products. Proces. aid for sugar	
INS 526	Calcium hydroxide	*	*	S, C	Additive for maize tortilla flour. Proces. aid for sugar	
INS 938	Argon	*	-	GA		
INS 941	Nitrogen	*	*	GA		
INS 948	Oxygen	*	*	GA		
INS153	Wood ash	-	*	MP	Coating agent	
INS 181	Tannin	-	*	W	Clarifying agent	
INS 184	Tannic Acid	-	*	W	Filtration aid	
INS 513	Sulphuric acid	-	*	S	pH adjustment of water in sugar production.	
INS 551	Silicon dioxide	-	*	W, Dehydrated FV Herbs & Spices	Gel or colloidal solution Anti caking agent	
INS 553	Talc	-	*	GA	Lubricant	0.5% -PFA

INS 901	Beeswax	-	*	GA	Releasing agent	
INS 903	Carnauba wax	-	*	GA	Releasing agent	
	Activated	-	*	GA	Decolorizer	

	carbon					
	Bentonite	-	*	FV, W	Filter aid, clarifying agent	
	Casein	-	*	W	Clarifying agent	
	Diatomaceous earth	-	*	S, FV, W	Filter aid	
	Egg white albumen	-	*	W	Clarifying agent	
	Ethanol	-	*	GA	Solvent	
	Gelatine	-	*	MP, FV, W	Emulsifier, Clarifying agent	
	Isinglass	-	*	W	Clarifying agent	
	Kaolin	-	*	GA	Filter aid , Extraction of propolis	
	Perlite	-	*	GA	Clarifying agent	
	Preparations of bark	-	*	S		
	Vegetable oils	-	*	GA	Greasing, releasing agent	
	Glycerol	-	*	Plant extracts	Restricted	
	Beet sugar	-	*		Restricted	

	Natural Colors	*	-	GA	Coloring agent	
	Carotenoids					
	Chlorophyll					
	Annatto					
	Saffron					
	Riboflavin (Lactoflavin)					
	Curcumin					
	Caramel					
	Canthaxanthin					

Food Additives may contain carriers which shall be evaluated

Key - list of abbreviations used in above tables:

* Could be used as

- Not used as:

GA - Generally Unrestricted

ME - Meat Products

W - Wine

CO - Confectionery

MP - Milk Products

C - Cereal Products

S - Sugar

CB - Cakes and Biscuits

F - Fat products

FV - Fruit/ Vegetable products

SO - Soybean products

2. Flavouring Agents:

(a) Volatile (essential) oils produced by means of solvents such as oil, water, ethanol, carbon dioxide and mechanical and physical processes

(b) Natural smoke flavour

(c) Use of natural flavouring preparations should be approved as per the national procedure to evaluate additives and processing aids based on Criteria for evaluation of additional inputs to organic agriculture (Appendix 3).

3. Preparations of Microorganisms:

- (a) Preparations of microorganisms accepted for use in food processing. Genetically Modified Organisms are excluded.
- (b) Bakers yeast produced without bleaches and organic solvents.

4. Preparations of Microorganisms and Enzymes:

These may be used as processing aids with approval based on the national procedure to Evaluate Additives and Processing Aids for Organic Food Products.

5. Ingredients

- (a) Drinking water
- (b) Salts (with sodium chloride and potassium chloride as basic component generally used in food processing
- (c) Minerals (including trace elements) and vitamins, fatty acids, amino acid and other nitrogenous compounds where their use is legally required or where severe dietary or nutritional deficiency can be demonstrated.

Appendix 5

Criteria For The Evaluation Of Additives And Processing Aids For Organic Food Products

List of additives, processing aids, flavoring agents and colors in organic food products are listed in Schedule- VI. The following aspects and criteria should be used for evaluation of additives and processing aids in organic food products.

1. Necessity

Additives and processing aids may only be allowed in organic food products if each additive or processing aid is essential to the production wherein the authenticity of the product is respected and the product cannot be produced or preserved without them

2. Criteria for the approval of additives and processing aids

The additives and processing aid may be used in the processing of organic foods where:

- (a) There are no other acceptable technologies available to process or preserve the organic product.
- (b) The use of additives or processing aids which minimize physical or mechanical damage to the foodstuff as a substitute for other technologies which if used would result in such damage.
- (c) The hygiene of the product cannot be guaranteed as effectively by other methods (such as a reduction in distribution time or improvement of storage facilities).
- (d) Additives or processing aids do not compromise the authenticity of the product.
- (e) The additives or processing aids do not confuse the customer by giving the impression that the final product is of higher quality than is justified by the quality of the raw material. This refers primarily but not exclusively, to coloring and flavoring agents
- (f) Additives and processing aids should not detract from the overall quality of the product.
- (g) The additives generally shall have 'GRAS' (Generally Regarded As Safe) status indicating that they are safe when used in accordance with good manufacturing practices.

3. Step by step procedure for the use of additives and processing aids

- (a) Instead of using additives or processing aids, the preferred first choice is
 - (i) Food grown under organic conditions which are used as a whole product or are processed in accordance with the IFOAM basic standards, e.g., flour used as a thickening agent or vegetable oil as a releasing agent.
 - (ii) Foods or raw materials of plant and animal origin which are produced only by mechanical or simple physical procedures, e.g., salt.
- (b) The second choice is:
 - (i) Substance isolated from food and produced physically or by enzymes, e.g., starch, tartrates, pectin.
 - (ii) Purified products of raw materials of non-agricultural origin and microorganisms, e.g., acerola fruit extract, enzymes and microorganism preparations such as starter cultures.
- (c) In organic food products the following categories of additives and processing aids are not allowed:
 - (i) "Nature identical" substances
 - (ii) Synthetic substances primarily judged as being unnatural or as a "new construction" of food compounds such as acetylated cross linked starches (modified starches).
 - (iii) Additives or processing aids produced by means of genetic engineering
 - (iv) Synthetic coloring and synthetic preservatives.
 - (v) Carriers and preservatives used in the preparation of additives and processing aids shall also be taken into consideration.

Appendix 6

Approved additives for manufacturing of packaging films for packaging of organic foodstuffs

Certain additives are allowed for use in manufacture of packaging films for packaging of foodstuffs. However, many of these are restricted for use in packaging of organic foodstuffs. Restricted means that the conditions and procedures for use shall be set by the accredited certification programme.

The following are approved additives under restriction: -

Use of plastics for packaging of organic foodstuffs

S. No.	Products	Limitation
1.	4,4'-Bis(2-benzoxazolyl)stilbene	<i>Restricted</i>
2.	9,9-Bis(methoxymethyl)fluorine	Restricted
3.	Carbonic acid, copper salt	Restricted
4.	Diethyleneglycol	Restricted
5.	2-(4,6-Diphenyl-1,3,5-triazin-2-yl)-5-(hexyloxy)phenol	Restricted
6.	Ethylenediaminetetraacetic acid, copper salt	Restricted
7.	2-(2-Hydroxy-3,5-di-tert-butyl-phenyl-5-chlorobenzotriazole	Restricted
8.	2-Methyl-4-isothiazolin-3-one	Restricted
9.	Phosphoric acid, trichloroethylester	Restricted
10.	Polyesters of 1,2 propanediol and/or 1,3-and 1, 4 butanediol and/or polypropyleneglycol with adipic acid, also end-capped with acetic acid or fatty acids C10-C18 or n-octanol and/or n-decanol	Restricted
11.	1,1,1-Trimethylolpropane	Restricted
12.	3-hydroxybutanoic acid 3-hydro xy pentanoic acid, copolymer	Restricted

Appendix 7

List of Approved Feed Materials, Feed Additives and Processing Aids for Animal Nutrition

1. Feed Materials of Plant Origin
 - a Cereals grains, their products and by - products
 - b Oilseeds, oil fruits, their products and by - products
 - c Legume seed, their products and by - products
 - d Tuber roots, their products and by - products
 - e Other seeds and fruits
 - f Forages and roughages
 - g Molasses as a binding agent
2. Feed Material of Animal Origin
 - a Milk and milk products
 - b Fish, other marine animals, their products and by - products
3. Feed Material of Mineral Origin
 - a Sea salt, rock salt Restricted
 - b Sodium sulphate Restricted
 - c Sodium carbonate Restricted
 - d Sodium bicarbonate Restricted
 - e Sodium chloride Restricted
 - f Calcium carbonate Restricted
 - g Calcium lactate Restricted
 - h Calcium gluconate Restricted
 - I Bone dicalcium phosphat precipitate Restricted
 - J Defluorinated dicalcium phosphate Restricted
 - K Defluorinated monocalcium phosphate Restricted
 - L Anhydrous magnesia Restricted
 - M Magnesium sulphate Restricted
 - N Magnesium chloride Restricted
 - O Magnesium carbonate Restricted
4. Trace Elements
 - a Iron Feed additives
 - b Iodine Feed additives
 - c Cobalt Feed additives
 - d Manganese Feed additives
 - e Zinc Feed additives
 - f Molydenum Feed additives
 - g Selenium Feed additives
5. Vitamins Restricted
6. Enzymes Restricted
7. Micro-organisms Restricted
8. Preservatives for silage
 - a E-336 Formic acid
 - b E-260 Acetic acid
 - c E-270 Lactic acid
 - d E-280 Propionic acid
9. Binders, anti-caking agent and coagulants

- a E-551b Colloidal silica
- b E-551c Kieselgur
- c E-553 Sepiolite
- d E-558 Bentonite
- e E-559 Kaolinitic clays
- f E-561 Vermiculite
- g E-599 Perlite

10. Processing aids for silage

- a Sea salt
- b Coarse rock salt
- c Enzymes
- d Yeasts
- e Sugar
- f Sugar beet pulp
- g Cereal flour
- h Molasses
- l Lactic

Appendix 8

Products Authorized for Cleaning and Disinfection of Livestock Buildings and Installations

1. Potassium and sodium soap
2. Water and steam
3. Milk of lime
4. Lime
5. Quicklime
6. Sodium hypochlorite (e.g. as liquid bleach)
7. Caustic potash
8. Hydrogen peroxide
9. Natural essences of plants
10. Citric, peracetic acid, formic, lactic, oxalic and acetic acid
11. Alcohol
12. Nitric acid (dairy equipment)
13. Phosphoric acid (dairy equipment)
14. Formaldehyde
15. Sodium carbonate