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ARISE Standards for Organic Farming

Organic agriculture embraces in its scope all agricultural systems that promote environmentally, and which are based on socially and economically sound production processes. Sustainable agriculture represents a broad spectrum of agriculture methodologies, which are supportive of the environment and small producers. The principal feature of these methodologies is the raising of food while conserving fertility of the soil and the biodiversity of crops and livestock and avoiding the use of chemicals for fertilisers, pesticides and herbicides. The methodologies range from traditional agriculture to alternative methods such as biodynamics. Organic agriculture is also referred to as "Tikau Kheti", "Rishi Kheti", "Ahinsak Krishi", "Jaiv Krishi", since it uses non-violent technologies and relies on living ecological principles as the basis of food production. The role of the organic farming movement is to support and strengthen such agriculture.

Adoption of organic practices in areas where chemical agriculture has been predominant requires a period of conversion. This conversion period gives the cultivator time to adapt and refine the production practices necessary to protect the environment, and to develop a system in which all lifeforms (from livestock to microbes) are conserved and the food produced is free from toxins and chemical pollutants.

For the practical application of organic production methods, more detailed standards are needed to assist the producer in achieving an optimal system which is socially, ecologically and economically sustainable. With the increased interest in organic production, a system of farm evaluation is required to ensure that products labelled and sold as "organic" actually originate from farms that follow organic production methods. In this way the consumer is assured of the authenticity of the product and the integrity of the organically produced product is not lost through the processing and distribution system.

The process also assures a basic minimum quality of life inclusive of nutritional availability for all those involved in the agricultural production and processing while also providing them a healthy life style based on a harmonious and value-based safe working environment.

In India, the concept of close contact between the consumer and producer is common. Development of such local market systems is also slowly emerging as a new movement in the west through community supported agriculture (CSA). In such contexts of direct consumer farmer contact there is no need for certification. However greater market

demand for safe organic food free of chemicals and the increasing distance between producer and consumer has stimulated the necessity for organic certification procedures and organic standards.

An integral component of certification is the verification of the organic management system by organic farming experts, including farmers. This provides a formal procedure for produce certification based primarily on a yearly description of the agricultural practices used by the producer in cooperation with organic farming experts. Similarly, at the processing level, standards are also developed against which the processing and operation and plant conditions can be investigated and verified by the certifying bodies which guarantee that organic processes have been used. However, farm certification cannot guarantee total absence of chemical residues in the harvested produce due to universal environmental pollution even on land where no chemicals have been used. However in such cases any residue level well below permissible limit for agricultural products and food stuffs can be accepted.

ARISE is bringing out these standards to support organic farmers and help the growth of the sustainable agriculture movement by creating a climate of confidence and trust in the authenticity of organic produce. ARISE standards for organic farming are based on Codex and IFOAM International standards.

Principles and Aims of Organic Farming

- 1) Organic agriculture is a holistic production management system, which promotes and enhances biodiversity and biological activity. It actually promotes and enhances ecosystem health, which at the same time produces food. It is based on the low use of external inputs and non-use of artificial fertilizers and pesticides. It also takes into account the fact that regional conditions require locally adapted systems.
- 2) Organic agriculture develops a system that ensures that all forms of life, from livestock to microbes, are conserved and productively utilised. They are also treated with respect and concern, keeping in view their health, safety and natural behavioral needs. For animal health care, traditional and Ayurvedic health care systems are promoted on farm.
- 3) Organic farming as far as possible employs farm inputs which can be reused or recycled, are generated on-site and which cause minimal pollution in the local external environment. It specially excludes all products and processes of genetic engineering and related technologies.
- 4) Organic farming produces food diversity that is free from toxins and of high nutritional value and good shelf life in adequate quantities and of a quality suitable for direct consumption and small scale processing.
- 5) It also protects promotes and enhances all forms of diversity, social, cultural living (biodiversity knowledge base inclusive of arts, crafts, music etc.) along with system of organisational and political governance especially at local level.
- 6) Organic farming assures a basic minimum quality of life inclusive of nutritional availability for all those involved in agricultural production and processing while also providing them a safe working environment.

Organic Farming

Basic Rules

- Organic agriculture is the practice of agriculture that develops a **viable and sustainable** agro-ecosystem.
- All species and varieties of plants that are cultivated should be adapted to the soil and climatic conditions that they are introduced to. An innate resistance to pests and diseases must emerge in such varieties.
- Seeds and plant material must be obtained from the existing organic farm or may be got from other certified organic farms.
- Manual and animal driven agriculture implements should be used. Highly mechanised agriculture implements like tractor should be excluded.
- The fertility of the soil is to be maintained and increased and the biological activity of the soil enriched.
- Organic material is to be returned to the soil to retain the humus content of the soil. Such organic material must be the product of organic farms or other sources free from toxic substances and farms must become self sufficient in producing such organic material.
- Pest and weed control is to be resorted to by means of rotation of crops, activating natural enemies, companion planting, predator management and use of mechanical means of elimination of pest and weed.
- Botanical plant extracts like neem extract and cow urine can be used for pest control.
- Use of genetically engineered organisms or products thereof is not permitted.
- Growth and health of crops are to be encouraged to respond to natural means of treatment.
- Cultivation has to guard against the occurrence of pesticide/weedicide contamination and carriage of inorganic chemicals used as fertilisers by other farms through irrigation and drainage.
- Soil loss through erosion and the depletion of water resources to be prevented.
- Organic produce must be stored, transported and conveyed to the final consumer in its most original state. Storage must ensure that the care taken at the cultivation stage is not lost by association with other produce not cultivated organically.

- Transportation of organic produce must be appropriate to the product. Damage to the product must be minimised.
- Pests at the storage and processing stage must be controlled by means of physical barriers, sound and light. Temperature and atmospheric control processes are permissible. Botanical extracts and herbal pellets can be used for preservation.
- Mixture of organic and non-organic products must be prevented during the course of processing. Additives and substances that diminish or alter the organic nature of organic produce are to be avoided.
- Processing methods should be based on mechanised, physical and biological processes.
- Packaging must take care to prevent material contact to diminish the organic purity of produce. Biodegradable material should be the preferred medium of packing. Waste generating packaging, pollution causing packing material are discouraged.
- Conformity to ILO conventions is a requirement. Equal wages for equal tasks.
- Direct sales by producers to be encouraged. Intermediary traders to demonstrate that price benefits are transferred to original producers.
- Women and children's rights may not be violated.
- Organic farming encourages employment and therefore all steps in producing organically produced food must be seen to be employment enhancing.
- Labelling of organic produce must declare openly whether it is fully organic or from a farm under conversion. Where a geographic appellation is employed, the product must be from the geographic region.
- Showing ingredients is essential on the labels of processed items but where spices used are less than 2% of the total weight of a product the fact does not have to be indicated. Processing steps that are not immediately obvious need to be listed.

Baseline Requirements of Organic Farming and Processing

Based on and drawing upon, the basic principles and aims of Organic Farming as stated earlier, the baseline requirements for Organic Farming are, as under:

1. Soil

The understanding that the soil is living matter and that it constitutes the womb, in which seed is nurtured and finds expression, is central to Organic Farming. Therefore, techniques like hydroponic or acroponics do not find place in Organic Farming systems. The soil (after the conversion period) should be rich in organic content and support considerable biotic activity. The soil structure should be such that it remains properly aerated and has good moisture retention capabilities. It should be free of toxins especially residues of chemicals, fertilizers, pesticides and agro-chemicals. However, it may not be feasible to stop contamination from external sources. Although in such cases residues are likely to remain well below the permissible limits. Soil and water conservation measures should be an integral part of organic farming practices.

2. Seed/Planting material

Seed should preferably be of organic origin, locally adapted, indigenous varieties which have inherent pest and disease resistant characteristics. It is preferable that seeds are generated on-farm, or based on farmer to farmer exchanges, ensuring the organic origin of the same. Seeds that are or have been modified through the use of genetic engineering or related technologies are not permitted.

3. Cropping Pattern

Cropping pattern should actively promote optimum intra and inter-species diversity, follow proper crop rotation schedules and other cultural practices to minimise external inputs. The use of trap crops and companion planting should be encouraged. Crop planning should be developed keeping a balance between various needs of agricultural produce i.e. between food, fodder, fiber, fuel, etc. Multipurpose crops which actively help self sufficiency on these aspects should be encouraged.

4. Farm Inputs

Farm inputs should largely be produced on-site with a very low dependence on external inputs. It should maximise the re-use and re-cycling of organic matter on the farm. It should employ animal traction/transportation wherever and to the extent possible.

5. Manuring

Organic manures and other organic nutrients, produced largely on-farm should be used for fertilization. The use of crop rotation and companion planting etc., should form the basis for mobilising the synergistic effect towards nutrient supply for farming on all farms. Care should be taken to reduce all forms of pollutions e.g. nitrate leaching, as also nutrient losses through soil, water and wind erosion. The thrust should always be to maintain or improve.

6. Pest and Diseases

That pests and diseases are inevitable, is an accepted fact of Organic Farming systems. Farming should be carried out in a way which ensures that losses from pests, diseases and weeds are minimised. Emphasis is placed on the use of crops and varieties well-adapted to the environment, a balanced manurial programme, fertile soils of high biological activity, adapted rotations, companion planting, green manure, etc.

Weeds, pests and diseases should be controlled by a number of prevention/cultural techniques that limit their development, e.g. suitable rotations, green manure, a balanced manurial programme, early seedbed preparations, mulching, and by mechanical control. Natural enemies of pests and diseases should be promoted and proper habitat management such as hedges, nesting sites, etc., encouraged.

7. Animal/Livestock Fodder

Animals/Livestock is an important and integral component of Organic Farming system because of the ability of the animals to convert organic matter into soil nutrients, thereby ensuring closed nutrient cycles, to the maximum extent possible. They also provide animal traction for farm purposes, besides providing many other benefits. Fodder of animals should be grown on farm and minimal external sourcing of the same should be done. They should be provided sufficient amount of good quality organic fodder, proper veterinary care and keeping systems in accordance that the natural behavioural needs, of these animals.

8. Harvesting

Harvesting methods should be in accordance with the general principles of Organic farming. No synthetic chemicals will be allowed to be used either before or after harvests, to cater to market needs.

9. Storage and Preservation

Storage should be done in a manner in which losses through pests or disease attacks or minimised while ensuring the nutritional quality of the produce is not disturbed. Use of synthetic chemicals for the same or methods like irradiation are not acceptable.

10. Processing

Processing methods that enhance or at least maintain the nutritional quality of the produce being processed should be employed. It is not acceptable to introduce any synthetic chemicals in the form of preservatives, anti-oxidants, emulsifiers, leavening or flavouring agents for increasing shelf-life, colour, taste or appearance. The process should be preferably adaptable and friendly towards small scale operation.

11. Labelling

Labelling of organically produced food or processed foods of organic origin should be clear and specific. There should not be any attempt to mislead the consumer in terms of contents, their nutritional values or describe the method of production used if that is not total organic. Those generated from farming systems that are in transition/ conversion should be suitably labelled.

12. Marketing

Marketing strategies and practices should ensure that it does not appropriate, infringe or Co-opt the intellectual property rights of traditional peoples, or that of people in general. Indigenous knowledge and practices that have gone into the entire process need to be recognized and prior informed consent of the collective taken, in written form, before making any claims or statements in respect of them in the context of Intellectual Property Rights.

It is accepted that adoption of organic practices requires a period of conversion. This period gives the operator time to adapt to and refine the production practices necessary to the environment in which the product is being produced. The system which supports production, i.e. soil, existing livestock etc., may also need time for the depiction of possible residues of agriculture chemicals which may exist in the soil, manure heaps, etc., and time for livestock to respond to the changed environment.

ARISE General Procedure for purposes of Certification of Organic Farms

The following clear procedural steps are required for eventual certification under the ARISE organic farming label:

- request in writing to be first registered from parties for verification of their farms or areas by ARISE organic farming experts;
- perusal and study by party of ARISE guidelines on organic farming;
- site verification by designated ARISE organic farming experts;
- ARISE Certification Board to consider site verification report;
- Board to approve or reject certification;
- Agreement between ARISE Board and the party regarding use of ARISE organic produce label; agreement to also specify annual inspections of farm procedures as required under EEC regulation 209/21.



ARISE Certification Format

(To be filled in only by ARISE office)

Strictly confidential, only for consumption of ARISE Certification Board

1. Date of assignment letter from ARISE
2. Office of origin of assignment letter
3. Inspection authorised by

Part I: Preliminary details to be filled in prior to Certification

4. Date of letter requesting certification
5. Name of party requesting certification
6. Whether certification requested for: (tick at appropriate place only)
 - a) Individual farm
 - b) group of individual farms
 - c) region of organic farming

7. Full address details of a), or b) or c)
.....
.....
.....

8. Detailed instructions of how to reach farm or area:
.....
.....
.....

Phone:

Fax: E-mail:

9. Whether party has been supplied with printed copy of ARISE standards?

10. Records maintained and system used: (Tick where appropriate only)
- a) Daily;
 - b) Weekly;
 - c) Fortnightly;
 - d) Monthly.
- Whether record system as maintained is adequate?

Part II: Miscellaneous details

11. Whether processing of organic farm produce is also carried out on the farm
 or off-site
12. Whether off-site party is a different farm, company or entity
-
-
-
13. Whether farm has been certified earlier and by which agency and when
-
-
-
14. Whether the farm has been decertified at any given time and when and for
 what reasons
-
-
-
15. Any other relevant details
-
-
-



Format for on-site certification report

1. Name of Investigator
2. Whether party intimated or not
3. Date/s of inspection
4. Whether inspection completed?
5. Brief report of farm/region including nature of farm and industry: This report should examine land use, condition of the soil, irrigation water quality, distance from highways and industrial areas etc. It must be recommend, if farm is converted, whether there is a necessity for soil analysis to check the presence of agricultural chemicals. This report should also provide physical features of the farm including a sketch or map of different growing area and acreage's.
6. Investigation report on organic farming procedures adopted at farm or region. (This is the main part of the inspection. Please record all details whether solicited or not, and all observations whether volunteered or not. Replies to all queries should also be recorded. The basic points for inquiry will be based on the ARISE guidelines document which accompanies this format of inspection: approximately one page each ought to be devoted to description of each segment).

Items for inquiry:

1. Choice of crops and varieties
2. Crop rotations
3. Fertilisation policy (see separate list of permissible fertilisation methods)
4. Pest, Disease and Weed Management (see separate list permissible methods)
5. Pollution control
6. Soil and Water Conservation
7. Wild Vegetative Products
8. Labeling

Section I

Organic Farming Standards

1. Choice of Crops and Varieties

General Principles

- All seed and plant material should be certified organic.
- Species and varieties cultivated should be adapted to the soil and climatic conditions and be resistant to pests and diseases.
- In the choice of varieties, genetic diversity should be taken into consideration.

Standards

- When certified organic seed and plant materials are not available, chemically untreated conventional materials shall be used.
- Where no other alternatives are available, chemically treated seed and plant material may be used.
- The certification programme shall define conditions for exemptions and set time limits for the use of chemically treated seed and plant materials.
- The use of genetically engineered seed, pollen, transgenic plants or plant material is not allowed.

2. Crop Rotations

General Principles

Rotations should be as varied as possible and aim to:

- Maintain soil fertility
- Reduce nitrate leaching
- Reduce weed, pest and disease problems

Recommendations

Rotations should include legumes.

Perennial crops/plants as border plants must be promoted (Agro-forestry)

Standards

The certification programme shall require the rotation of non-perennial crops 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.

3. General Policy

General Principles

- Sufficient quantities of organic material should be returned to the soil to increase or at least maintain its fertility and the biological activity within it.
- Organic material produced on organic farms should form the basis of the manurial programme.
- Organic manure production units like compost pits, biogas slurry, bio-dynamic manures etc. should be set up on each farm.
- Use of improved manual and animal driven agricultural implements should be promoted.
- Highly mechanised implements e.g. tractor, is restricted.

Recommendations

- Fertilisation management should minimize nutrient losses.
- Accumulation of heavy metals and other pollutants should be avoided.
- Non synthetic mineral fertilisers and brought in fertilisers of biological origin should be regarded as supplementary and not a replacement for nutrient recycling.
- When human faeces is used, consideration should be paid to the absence of pollutants. Biogas plants attached with toilets should be encouraged. Transmission of pests, parasites and other infectious agents should be prevented. Even in the case of organic manures care should be taken that it does not contain pathogenic microorganisms.

Standards

- Organic material shall form the basis of the fertilisation programme.
- The certification programme shall set limitations to the total amount of organic material brought into the farm unit, taking into account local conditions and the specific nature of the crops.
- Mineral fertilisers shall only be used in a supplementary role to organic materials. Allowance for use shall only be given when other organic fertility management practices have been optimised.
- Mineral fertilisers shall be supplied in their natural composition and shall not be rendered more soluble by chemical treatment.

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

4. Pest, Disease and Weed Management

General Principles

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

Recommendations

- Weeds, pests and diseases should be controlled by a number of preventive cultural techniques which limit their development, e.g. suitable rotations, green manures, a balanced manurial programme, early seedbed preparations and predrilling, mulching and by mechanical control.
- The natural enemies of pests and diseases should be protected and, through proper habitat management such as hedges, nesting sites, etc. encouraged.

Standards

- Products used for pest, disease and weed management, prepared at the farm from local plants, animals and microorganisms are allowed.
- In case of use of microorganisms, mixed culture of local microorganisms which can naturally exist in nature can be used to ensure long term ecological compatibility.
- All equipment from conventional farming systems shall be properly cleaned and free from residues when used on organically managed areas.
- The use of synthetic herbicides, fungicides, insecticides and other pesticides is prohibited.
- The use of genetically engineered organisms e.g. earthworms and microorganisms or products thereof is not permitted.

5. Pollution Control

General Principles

- All relevant measures should be taken to minimise pesticide contamination from outside and within the farm by wind drift, drainage and irrigation.

6. Soil and Water Conservation

General Principles

- Soil and water resources should be handled with a view to sustainability.

Recommendations

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

Standards

- Clearing of land through the means of burning organic matter e.g. slash-and-burn, straw burning shall be restricted to the minimum.
- Relevant measures shall be taken to prevent erosion.
- Excessive exploitation and depletion of water resources are not allowed.
- Wherever possible, animal traction should be used for tillage etc. and farm operations (local transportation).
- Relevant measures shall be taken to prevent salination of soil and water.

7. Wild Vegetative Products

General Principles

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

Recommendations

- When harvesting or gathering wild (or forest) products, attention should be paid for maintenance and sustainability of the ecosystem.

Standards

- 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.
- Produce can only be certified organic if derived from a clearly defined collecting area which is not exposed to prohibited substances, and which is certified as being utilised sustainably.

8. Labelling

General Principles

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

Recommendations

- When the full standards requirements have been fulfilled, products should be sold as "produce of organic agriculture" or a similar description.
- The use of "in-conversion" labels may be confusing to the consumer. When used, conversion labels should be clearly distinguishable from the full organic label.
- Product labels should list processing procedures which influence the product properties in a way not immediately obvious.
- Additional product information should be made available on request.
- All components of additives and processing aids shall be cleared.
- Ingredients derived from wild production should be declared as such. A multi-ingredient product containing both certified wild and certified organic ingredients may be labelled 'organic'.

Standards

- Mixed products where not all ingredients, including additives, are of organic origin may be labelled in the following way (raw material weight):
 - I 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.
 - II 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 not be used, close to the indication of proportion of organic ingredients.
 - III. 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 products may not be called "organic".

Section II

Permitted organic manure

Manures produced on the farm

- Compost
- Farmyard manure
- Biogas slurry
- Liquid manure (animal urine / fermented manures / vermiwash)
- Organic waste (crop water etc.)
- Green manure
- Straw manure

Commercially available organic manures

- Manure, liquid manure or slurry (if possible with preparations added at source)
- Straw and other plant material
- Processing bioproducts as addition of farm produced manure like horn, bone meal, blood and meat meal, hair and feather, waste grape processing and so on. (Care must be taken for pathogenic microorganism contamination).
- Seaweed products
- Saw dust and bark shavings (from timber not contaminated with fungicide or insecticides).
- Peat without synthetic additions for seedling (or plant raising) as long as there are no alternatives (from the point of view of over exploitation of natural resources. Seaweed product fish and fish products as well as peat are to be used in moderation).

Brought in supplementing mineral fertilizers

- rock dusts
- pulverised earth
- lime fertilizer (usually slow acting types such as dolomite, calcium carbonate, sea shells, quick lime, calcified seaweed, lime from iron and steel processing industry.

- Natural rock phosphates low in heavy metals.
- Basic slag
- Potassium fertilizers less than 3% Chloride (in case of potassium deficiency)

Miscellaneous

- water soluble seaweed extracts
- extracts and preparation from plants.

Section III

Permitted measures and substances for plant treatment and protection

1. *Biological control*

- Biological control through crop rotation, mixed cropping and nutrient balance in soil.
- Encouragement and introduction of natural enemies of pest of crop plants (predator, mites and worms)
- Insect traps (pheromone and colour traps)
- Mechanical scorers, mechanical traps slug and snail barrier etc.
- Repellent (no synthetic chemical to be brought into fields)
- Botanical plant extracts like neem, tobacco, garlic, onion, papaya etc. can be used as pest control measures
- Biodynamic preparation and methods.

2. *Additional plant protection measures etc.*

- Preparations which enhance resistance of plants and limit certain pests and diseases. Plant-based preparations

3. *Milk and milk products.*

4. *Measures against animal pests*

- *Bacillus thuringiensis* (bacterial preparation)
- Viral, fungal and bacterial preparation in polycultures, (monoculture or pure culture should be avoided) locally suitable strains should be used
- Sterilised male insects
- Pyrethrum extracts and powder
- Use of storage protection only without synergists with respect to cultivation. This is valid as soon as agents without synergistic are available
- Quassia wood tea or broth

- Oil emulsion (without synthetic chemical additions) on the basis of vegetable oil or paraffin oils for
- Soft soap/potassium salt of fatty acids.
- Calcium chloride (against bitter pit in apples)

5. Measures against fungal diseases

- Wettable sulphur in fruit and viticulture growing in combination with for example bentonite or seaweed meal.
- Water glass (sodium silicate, potassium silicate)
- Rock dusts
- Sulphur preparation such as (hepar sulphur)
- In emergencies, copper up to 3 kg cu/ha/year and a maximum of 500 gr per use only for wine and fruit growing (copper content of the soil within the last 3 years must be known because of possible accumulation (soil analysis).
- Coffee
- Gelatin
- Rock dust
- Ethyl alcohol
- Diatomaceous earth
- Neem

Section IV

Parameters for clarifying farm products

Farm certification

- soil analyses
- p H
- Water holding capacity
- Texture
- Cation exchange capacity
- Microbial population
- Earthworm density and activity
- no toxic residue
- appropriate trace element concentration

Water Analysis

- physical & chemical parameters