Best Practice Guideline
for Agriculture and Value Chains

developed by the
Sustainable Organic Agriculture Action Network (SOAAN)

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Comments on this second draft are encouraged. They may be forwarded to the SOAAN Secretariat, to the attention of David Gould, IFOAM Value Chain Facilitator, at d.gould@ifoam.org.

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I. Sustainable Agriculture: Global Discussion, Organic Approach

Agriculture is a key part of human civilization. The growing human population, changes in diets, and depletion and degradation of natural resources caused by destructive farming practices all pose challenges to the sustainability of agriculture. Under the current dominant paradigm, hunger is expanding while health problems multiply, and soil fertility, fresh water quality and quantity, and biodiversity continue to decline. Efforts to maintain this paradigm, which relies on non-renewable energy and resources, are proving inadequate. A paradigm shift is needed to move from current destructive practices to an integrated, holistic approach aimed at improving sustainable production and food consumption in both the short- and long-term.

A. The Organic Movement: Leadership Across the Value Chain

This document is a contribution by the organic movement[1] to the global discussion on sustainable agriculture. It aims to lead, guide and inspire people from every part of the earth to work cooperatively to reverse the destructive path modern agriculture has taken on our planet. It aspires to empower individuals and organizations to exercise their own ingenuity and assume leadership, and to improve their own performance and practices, quality of life, and the well-being of their communities.

Because changing to sustainable agriculture also implies necessary changes in behaviors of all actors in the value chain, this document encompasses the entire value chain until the final consumer. Each party in the value chain can use the guidelines herein regardless of their own stage of development, realizing that their situation is unique yet part of a common whole. Any other stakeholders who support and interact with these value chains, including those involved in research, policy, marketing, or supporting infrastructure may also use these guidelines.

Organic agriculture holds solutions for conserving and restoring our natural resources. It is the core around which sustainable agriculture can be built, stable human societies can be secured, and healthy ecological systems – supporting all forms of life – can be maintained. A growing body of science and research[2] supports these conclusions. The guidelines and practices this document describes are the result of a participatory process by members of the organic movement and reflect the collected thought reached through that process[3].

[1] This document regards any system that uses organic methods and is based on the Principles of Organic Agriculture as "Organic Agriculture" and any farmer that employs such practices and such systems as an "organic farmer" regardless of whether the products are marketed as organic or not. Biological, biodynamic, permaculture, agroecological or natural farming etc., are also considered consonant with organic agriculture methods and approaches. Organic farming is not exclusive to any form of land and/or resources ownership nor is it restricted to the size of a farm.

[2] This will be a link to a page on the IFOAM website that references all of the citations used in the drafting of this document. It will be a living library of resources that gets updated and catalogued over time.

[3] This will be a link to a page on the IFOAM website that describes the history of SOAAN and its process.

Organic approaches and methods must continuously improve. Sustainability is an extremely complex topic. Continued research and innovation is needed to improve production techniques and yields, the ecological sustainability of organic agriculture, and the social responsibility and fairness in its value chains. We must better understand and balance many and sometimes opposing considerations and choices that operators in the value chain must make. This document is therefore intended as a living document and a platform for ongoing exchange of ideas, and will be periodically revised and improved to express the best thinking available. We encourage broad participation in its further development.

We also acknowledge that the efforts of the organic movement do not exist in a vacuum. There are broader and deeper historical, political, social, and economic forces that have created the challenges the world faces, and to which farmers and the value chain are subject. As such, organic agriculture and the organic movement should not be seen as solely responsible for achieving all of the changes needed to manifest a sustainable and healthy society. Rather, people can use organic approaches to life as a means for making their own contribution toward a better society. We call on governments and consumers to actively support the objectives and practices described in this document.

B. Uses of this Document

The text of this document is intended to be formative, not normative. It is not intended as a compliance document *per se*. Its possible uses include:

- Serving as guidelines for improving the ecological, societal, cultural, and economic sustainability of farms and businesses;
- As a basis for setting research and development agendas for improving organic and sustainable farming and related value chains;
- Serving as a benchmark for programs, operations, and sustainability assessment tools for agriculture and its value chains;
- Promoting the development and use of indicators and metrics to assist in an operation's self-evaluation or external evaluation and transparency;
- Enabling assessments of the regional and global impact of specified sustainability practices;
- Informing and influencing policy agendas of governmental and non-governmental entities;
- Providing a resource for capacity building, education, and raising awareness about sustainability issues.

C. The Organic Movement's Vision of Agriculture in a Sustainable Society

The organic approach to sustainable development is based on IFOAM's four Principles of Organic Agriculture, related to health, ecology, care and fairness. Organic agriculture encompasses holistic principles to sustain the health of all livings systems on earth. Fairness concerns equity, respect, justice, and stewardship of the world, shared by people and all living species. Care involves exercising the Precautionary Principle, improving efficiency and productivity in a responsible manner.

> ***"Organic agriculture is a production system that sustains the health of soils, ecosystems, and people. It relies on ecological processes, biodiversity, and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation, and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved." (IFOAM Definition of Organic Agriculture, 2007)***

Organic agriculture recognizes the interconnectedness of human health, the natural world, and agricultural production systems. It starts with the assumption that humans are partners and participants in nature and that agriculture and food systems must maintain and enhance the natural capital on which humans depend for ecosystem services. Sustainable human society is recognized as an integral part of nature, not as a system operating separately.

The heart of sustainable development in agriculture is the farm and its surroundings, and the well-being of the people living and working on the farm. Farms, like all other human activities, do not exist in isolation. Traders and processors of food are also responsible for supporting all components of sustainability in primary production systems. Rural development is of prime importance to global sustainability. Improved coordination among family farms can greatly benefit society. In this context, special emphasis is given to smallholders and family farmers along with their agricultural communities and markets. Smallholder and family farms represent the dominant modes of food production in the developing world, particularly in Africa and Asia where these systems provide most of the staple food produced. Larger farms can also be sustainably managed and may have greater resources to employ people and to experiment with innovative practices. Sustainable farms and rural communities are free from poverty, have their own food security and food sovereignty, and provide opportunities for learning and improving the collective quality of life.

Urban settings and populations are synergistic and complementary partners in rural development. Cities are nexuses where trade happens at greater scale, exchange of

resources and ideas find new paths, and knowledge and innovation spread to other parts of the globe. Farming and gardening likewise contribute to food security, quality of life, and awareness of environmental issues in urban settings. Connecting these urban benefits to a broader context that considers the origins of food is a way to support society's motivation to enhance the sustainability of all agricultural production systems, urban and rural.

II. Best Practices

This document divides sustainability into five complementary and interactive dimensions: social, ecological, economic, cultural and accountability. For clarity, each is presented separately with its own objectives. There is no hierarchy or preference among them. Each dimension is divided into a set of complementary facets that are discussed in terms of the values and approach of the organic movement, and what the best practices related to each are.

Best practices are to be understood as those activities that lead to achieving the objectives described by the dimensions. This document works within a global perspective – offering guidelines for performance and progress toward sustainability wherever relevant activities are being undertaken in the world. It recognizes that best practice is specific to context: we thus strive to be aware of, respect, interpret, and share all kinds of best practices as may be implemented by any particular producer or organization. Furthermore, we understand sustainability to be dynamic: what constitutes a holistic approach to best practice evolves over time for any given party. Best practice implicitly embodies an attitude of continual improvement.

A. Social Dimension: People live in equality and equity; a rights-based approach.

Description: All persons are born with rights, deserving equal and mutual respect. These include the right to safety, freedom from discrimination, access to opportunities for learning, self-determination, and right livelihood.

Objective: Engaging in societal activities should benefit all participants. Each person directly involved in the activities of a given operation should be assured of their basic human rights and opportunities to pursue and attain a decent livelihood.

1. Equity and gender

Values and Guidelines

- All persons deserve equal consideration.

- Women and men have equally important and necessary viewpoints, skills, and approaches to addressing the needs of society.
- Maximizing human potential leads to thriving operations and communities. Members of a community should have appropriate opportunities for making decisions about their current and future lives and to seek satisfaction with their own well-being and be motivated to contribute to the well-being of others.

Practice Examples

- A strict equity and non-discrimination policy and practice applies to all stakeholders. There is no gender bias concerning hiring, remuneration, access to resources and education, and career opportunities.
- Vulnerable groups, such as women, minorities, and disadvantaged staff are proactively supported. Value chain actors hire persons in their communities with physical and/or mental handicaps for appropriate jobs.

2. Right livelihood

Values and Guidelines

- An adequate wage level ensures the ability to earn a livelihood, including sufficient pension and social security in order to prevent poverty.
- In addition to having basic needs met to maintain good health, well-being implies that employers, workers and their families can develop new skills, knowledge, and abilities. A more educated, satisfied, and prosperous work force and local community are more likely to enjoy loyalty, innovation, and a thriving local culture. These features of community help make farming life more attractive and thereby stabilize the population and work to keep residents from leaving in search of a better life.

Practice Examples

- Prices reflect the real cost of the entire process of sustaining a regenerative ecological system, including supporting a right livelihood for farmers and farm workers and their families consistent with this document.
- Employers on all supply chain levels pay wages that are adequate for a decent standard of living and the social security of all employees.
- Employees who reside on the farm or enterprise location are provided with housing that meets the objectives of the sustainability dimensions described in this reference document.
- If employees participate in profit-sharing or price-division schemes, the benefits they receive are proportionate to the risks they assume.
- Employees are given incentives and rewards for bringing improvements to the operation.
- Employees are able to earn or contribute to pension or retirement plans, or awarded such benefits for long-term dedicated service.

- Employees are offered job-related education that provides potential for enrichment of their work and/or advancement in their position.

3. Labor rights

Values and Guidelines

- The more people in any given community or work environment are satisfied with their positions, the more stable the operation is and the more likely it can be successful.
- All workers should have the freedom to associate and organize themselves peaceably in whatever manner they see fit, within relevant legal frameworks.
- Employees have the obligation to work to the best of their abilities.
- Generally speaking, the more employees a given operation has, the greater the need to devote resources to ensuring that labor and human rights are respected. Smallholders who must hire farm labor are nonetheless expected to exercise appropriate practices.
- Each and every link in a sustainable value chain should be responsible for respecting the rights of all persons involved in its respective operations.

Practice Examples

- Operators respect the rights of indigenous peoples, meaning they do not use or exploit land whose inhabitants or farmers have been or are being impoverished, dispossessed, colonized, expelled, exiled, or killed. All land gets used under conditions of free and prior informed consent of the original inhabitants. *Note: Over the course of history many societies have transgressed these principles. Our intention is to make sure that these transgressions never again happen.*
- Operations clearly agree to terms of employment with every employee.
- Forced or involuntary labor is not used in any manner in the value chain. Enterprises do not use child labor. Children's work is only allowed if:
    - Such work is not dangerous or hazardous to their health and safety;
    - Such work does not jeopardize the children's educational, moral, social, and physical development; and
    - Children are supervised by adults and have authorization from a legal guardian.
- All value chain operations have and enforce a policy on social justice that includes basic human rights, fair and decent working conditions, and other benefits. They exclude from their transactions any operations that violate any of the precepts described in this section on Human Rights. *Note: Smaller operations can address such practices in a more informal manner, but should nonetheless be transparent about what they do.*
- The owners and managers of operations positively and actively encourage the collective organization of their employees or contracted smallholders.
- Operations strive for stability in their employment practices, offering more permanent contracts to employees in order to provide more secure livelihoods for

them. Regular/contracted employment is generally preferable to temporary employment.

4. Safety and Hygiene

Values and Guidelines

- The health and safety of people is of primary importance to individuals, their families, and their communities. A stable, healthy work force is good for business and good for the local economy and community. Safe conditions reduce health care costs.
- A substantially reduced health risk exists for workers on organic farms, due to non-use of toxic agro-chemicals.

Practice Examples

- All workplaces provide the people there with potable drinking water, clean conditions for eating, and appropriate sanitary facilities.
- Workers are trained about hazards inherent in their work environment. All working people are provided with adequate protection from noise, dust, sunlight, undue hazards related to machinery and equipment, and exposure to chemicals and waste.
- When no national legislation is in place, a given operation provides all employees and their families with an equal health care package.

B. Ecological Dimension: Common resources are used sustainably.

Description: Common resources are those resources that all peoples of the planet need and share for their survival. These include soil, water, air, animals, biodiversity, and mineral resources.

Objectives: Foster regenerative systems by improving soil quality through increasing nutrient cycling and capture; eliminate dependency on non-renewable resources; avoid pollution and human-induced climate change; respect animal welfare; and enhance the diversity within farms and their surroundings.

1. Water – Quality and Quantity

Values and Guidelines

- All material life on Earth is based on water. The quality and quantity of water is a determining factor for the support the life forms in any given environment.
- Pollution of water is a threat to the functioning of healthy organisms, ecosystems, and communities.
- The total impact on water use of a given product requires each link of the value chain (including farms) to be responsible for understanding its own water use,

sources, quantity withdrawn, allocation, and condition and quantity of the water after use.

- The overall health of the watershed should be taken into consideration by being aware that multiple individual operations, each with insignificant environmental impact, may collectively have cumulative detrimental effects. Examples of such impacts include but are not limited to the depletion of aquifers, rivers, or other water supplies, and the cumulative impacts on water quality from multiple farming, processing, and/or aquaculture operations in the same area.

Practice Examples

- Operators assess their water use to determine whether their practices deplete or degrade water resources~~,~~ and then plan how to improve efficiency. If water resources are depleted or degraded, operators take corrective actions.
- Water use is as efficient as possible by careful timing of use, system design (including water harvesting and cropping patterns), appropriate use of technology (including irrigation and processing equipment characteristics), reducing losses to leakage and waste, and recycling it through the system when feasible.
- All users of water in any given locality are mindful of the needs of other users of those supplies. Access to such resources is not unfairly prejudiced. Overall community well-being is not unduly compromised by the disproportionate use of or impact on quality of water resources by particular parties or operations.
- Sustainable freshwater withdrawal and use does not impair the functioning of natural water cycles and ecosystems. When returning water to the source, the water stays close to ambient water temperature. Farmers and other value chain actors in their regions therefore manage the water they use so that it supports the best practices for conservation, genetic diversity and quality, and soil building as described in this document. All three of these aspects are considered.
- Operators do not pollute water supplies with fertilizers or other chemicals, and prevent contamination from animal manures and other sources of pathogens. They are aware of all the materials they use and how these may end up in the water, and take steps to mitigate negative effects.
- Crops and livestock are selected and managed for their ecological compatibility to the climate where they will be raised, to avoid long-term depletion of water supplies, degradation of water quality, and/or damage to soil health.
- Watercourses are important pass ways for a wide range of species. Constructions of pumps, dams etc. do not block migration or transport route.

2. Soil and Fertility

Values and Guidelines

- Soil is the basis of agriculture. Building soil of high quality is therefore critical to a sustainable system.

- Biological activity is a primary indicator of soil quality and health. High-quality, fertile soils are living systems with an overall capacity to act as the foundation of a regenerative ecological system. The more that soil biological activity is encouraged, the greater the potential it has for being productive.
- Eliminating toxic plant protection materials and techniques preserves soil and water quality, does not interfere with soil biological activity, and does not detract from the health of people and animals.
- Healthy soils are the foundation for healthy plants. Healthy plants are adapted to and thrive in their environment, are more tolerant to attacks by pests and diseases, and, in agricultural terms, also provide good nutritive value. Healthy crops and land use provide a home for wild biodiversity that play a role in the equilibrium of the farm by feeding on potential pests.
- Increased organic matter is a basis of carbon sequestration and helps counter the effects of climate change.
- Soils with high organic matter and good texture (including non-compaction) hold water better than low-organic matter soils, allowing for reduced need for irrigation, greater ability to capture dew, and increased ability to absorb water and avert flooding. High quality soils also allow crop roots to penetrate deeper and wider, thereby enhancing efficiency of crop water and nutrient uptake.
- Recognizing the natural resources available in a specified tract of land, and farming within those limits makes for more realistic expectations of productivity and profit. Minimizing use of off-farm inputs minimizes the negative (global and local) environmental impacts of extracting, producing, manufacturing, and/or transporting them. It also minimizes the eutrophication of soils, air, and water.
- Cropping plans, crop and variety selection, and crop rotations adapted to local agro-environmental and socio-economic conditions serve the long-term agronomic needs of farming enterprises and ecosystem services simultaneously.

Practice Examples

- Soil is protected from loss due to erosion and incidental or deliberate exposure to the elements (sun, wind, water, fire, and animal traffic). Soil is kept covered by living plants and mulch to the greatest extent feasible.
- The organic matter content of the soil is increased. Farmers enhance biological activity of the soil and are aware of activities that disrupt its biological activity. They are careful with heavy equipment that might impact soils unnecessarily, and avoid frequent tillage. Whenever possible, perennial crops and agro-forestry types of agriculture are promoted.
- Farms obtain their soil fertility primarily from the farm itself, by the choice of crops grown in rotation, recycling of crop and other plant residues, the use of nitrogen-fixing and cover crops, and animal manure. Nutrients in farming systems are cycled in a way that maximizes efficiency, minimizes waste and loss, and optimizes the use of resources produced on-farm in closed-loop systems. If sources of fertility are off-farm, the sources are known, with local and organic sources preferred. Manure from intensive conventional animal production is not used.

- Farmers make due consideration of the advantages of incorporating composted plant and animal manures into the soil, such as pathogen reduction, prevention of nutrient leaching and promotion of residual nutrients in the soil.
- Farmers make efforts to understand the nutrient cycling in their soils. Skillful application of trace elements can improve uptake of macro-elements.
- Farmers primarily rely on interrelated cultural practices including crop rotations, natural enemies, and biodiversity management to control pests, diseases, and weeds. Natural and least-toxic crop protection materials are preferred; synthetic and toxic pesticides are avoided.
- The water-holding capacity of soils is increased. Retention of soil moisture mitigates the need for added water via irrigation, which in turn helps guard against deposition of salts in the soil from the evaporative results of irrigation and helps assure the long-term productivity of the soil.
- To enable better planning to guard against problems of salinization, the salt content of irrigation water is taken into consideration.

3. Biodiversity

Values and Guidelines

- Agriculture originates and functions in the natural environment. We respect and value the diverse base of nature as the bank of usable varieties and landraces for food, medicine and/or other benefits. Nature is the home for many beneficial organisms that contribute to maintaining equilibrium on the farm and an ongoing source of inspiration and knowledge. The resilience, creativity, and power of the natural environment surpass human abilities and control. Restoration or recovery of thriving ecosystems takes more time than it takes us to destroy them. It is our responsibility and in our interests to preserve these resources.
- The non-use of synthetic herbicides, pesticides, and fungicides as well as fast-acting mineral fertilizers (which upset biological equilibrium) is a major reason for the higher diversity characteristic of organic farms, but these factors alone are not sufficient to secure high level of functional and wild biodiversity.
- We understand and consider biodiversity from several standpoints simultaneously:
  - The variety of ecosystem types found;
  - The number of species present;
  - The genetic diversity within any given species;
  - Diversity found above and below ground;
  - Diversity found in micro- and larger organisms.
- Good biodiversity stewardship implies optimizing the number and degree of beneficial interactions among components of the diverse system, including food webs, symbioses, biological pest control, etc., so-called functional biodiversity.
- The maintenance and improvement of highly diverse agro-ecosystems contribute to the resilience of farms against the phenomena of modern climate change/disruption, e.g. warming trends, strong storms, and especially dry or wet seasons. Integrated,

sustainable designs involve a high diversity of adapted species that harvest sunlight and atmospheric carbon and conserve moisture. Animals contribute to the overall functioning of the production system by depositing their manure, controlling weeds, and making use of forages not usable by humans. A combination of grazing animals and domestic birds (e.g., chickens, ducks, geese) can increase diversity and replace fossil fuel-driven equipment such as mowers and tillers.

- We encourage the stewardship and restoration of a diversity of species to help farms achieve equilibrium and resilience over the long term. Marginal or non-productive areas can become repopulated with diverse species that provide ecosystem services, such as allowing beneficial species to take up residence, sequestering carbon, and acting as physical buffers, barriers, or shelters, etc.
- We recognize that many species depend for their existence on being able to travel beyond the confines of a farm, and that disruption of their pathways can result in their disappearance. Such results can upset the biological equilibrium of an area and create a cascade of negative effects, e.g. disappearance of other species whose existence relies on the species in question. This effect can upset the stability of farming and cropping systems by negatively impacting the lives of beneficial species.
- Availability of robust and regionally adapted varieties increases when more people work toward their development and distribution. Unless there is continual interest in preserving and utilizing certain varieties, they can be lost. The more farmers pay attention to the species they grow, the more likely that improved varieties and performance characteristics can be found and multiplied. Sharing genetic resources among farmers guards against inbreeding and weakening of strains.
- The free use and exchange of genetic material is a common good. Consolidation of supply and ownership limits farmers' opportunities and can threaten food sovereignty and food security. Limited interests may focus on a limited range of characteristics e.g., convenience, profit, or limited performance characteristics that may prove inadequate or incapable of enduring long term. Reducing the genetic base puts overall gene pool vigor at risk and limits the possible benefits that humans can receive from a wider selection.

Practice Examples

Conservation Areas

- All actors in the value chain are concerned with maintaining and enhancing biodiversity. Actors who are not primary producers are responsible for their own activities, as well as for the impacts of their own operations on the biodiversity concerns of the primary producers.
- Sustainable development does not encroach on areas of native vegetation and other high conservation value areas, in particular native forests, steep slopes, riparian vegetation, wetlands, swamps, and floodplains.
- Any collection of wild species or products for whatever purpose happens in a way that respects the obligations of international treaties (such as the Convention on biological Diversity – CBD), national conservation regulations and the best practices

and guidelines described in this document, and does not threaten the existence of the species being collected or other species that depend on it.

- Not all the land on any given holding is used for crop and/or livestock production, and/or other human activities. At least some is set aside for biodiversity habitat. Such set-aside areas may be left in their "wild" state or may be enhanced to encourage an increase in diverse populations (especially in case of degraded lands). *Note: Said enhancement should not result in exotic species dominating the set-aside area.*
    - Operations specify and designate a minimum percentage of area as biodiversity set-aside. They include a defined minimum time span to avoid set-asides being moved too often, which could hamper the value of biodiversity.
- Farmers maintain or re-establish natural vegetation areas around springs, along natural watercourses, on steep slopes and hills, and other sensitive parts of the ecosystem. Natural wetlands should not be drained.
- Farmers respect the right of existing species to maintain access to their natural habitat for their own survival. Corridors are left undisturbed (or re-established where none or insufficient ones exist) to enable species to follow their normal patterns of movement within and among farms. *Note: This does not mean that pests cannot be counteracted if they cause undue damage to the farm's productivity.*
- In larger holdings, corridors and other non-farmed areas are integrated within the farm holding, not just at the perimeter.
- On farms without biodiversity areas – i.e. all of the area has been transformed or used for crop, livestock, or other human activities – corridors and other set-aside areas are established by letting the area(s) revert to their native vegetative and animal populations, and/or by proactively reintroducing native species. Farmers only introduce non-native species and/or varieties with great care sufficient to assure that native species are not obliterated or that exotic varieties do not spread destructively in the local ecosystem.

Farm eco-intensification:

To preserve and enhance conservation areas, as well as to increase overall productivity, farmers strive for eco-intensification of their own production systems. This includes but is not limited to the following:

- Integration of perennial species, which provide ongoing harvestable crops and fertility through crop residues;
- Avoidance of mono-cropped areas in favor of an integrated and diverse mix of plantings, in the time or space, thereby providing a greater balance of nutrient use and cycling, and of pest and disease tolerance;
- Thoughtful planting patterns (including field size and shape) that optimize the interface of cropped areas with non-cropped (wild or biodiversity) areas to encourage interactions with beneficial organisms ("edge effects");
- Agro-forestry, or establishment or maintenance of tree species and multi-story production in all or part of the farm, where existing climatic conditions and crop growth requirements make this possible;

- Appropriate integration of animals into the production system to allow for greater diversity, biological activity, and cycling of nutrients; (*Note: This does not mean that the converse applies, i.e., that livestock/grazing systems must integrate crops. Cropping systems and grazing systems that work in parallel on the same lands but are managed by different groups may be a satisfactory arrangement.)*
- Innovation and careful experimentation, including ways to use new techniques or species to improve diversity, fertility and productivity, provided that the Principles of Organic Agriculture and organic certification standards are respected.

Genetic Diversity

- All crop and livestock producers make efforts to maintain and improve the quality and diversity of the genetic materials they use. This includes seed, vegetative propagation materials, and animal breeds. It may also include deliberate stewardship or culturing of microbial and fungal populations for such purposes as enhancement of soil biological activity, compost activation, and livestock health.
- Exploitation of indigenous landraces and species, and/or propagation of them on farms is done in a manner that does not jeopardize the vigor of the indigenous stock.
- Farmers work actively – both individually and collectively – to assure the availability of high quality and diverse planting materials and animal breeds, by seed saving and exchange, and on-farm breeding. Farmers choose varieties that can be multiplied on farm, and can thus be adapted or adaptable to the local natural resource base. They avoid those varieties or breeds that rely on a continued use of high levels of off-farm inputs for their production, regardless of whether these inputs are for fertility, pest control, or any other purpose. If such conditions cannot be met, farmers change crops or breeds.
- As a first choice, organic farmers choose seeds that are organically grown and that thrive under organic growing conditions. They choose varieties and breeds for optimal performance, balancing harvest quantity (productivity) with nutritive value, ease of production, and market acceptance. GMO breeds (either plants nor animals) are not used. If there is a potential for seed sources to be contaminated with GMO materials, farmers and seed suppliers take measures to verify absence of GMOs (including analytical testing).
- Farmers raise animal breeds that reproduce naturally and give birth without routine human intervention, are resistant to local/regional diseases, and are adapted to indigenous forages.

4. Humane and healthy animal husbandry

Note: While this document does not yet include details about beekeeping and aquaculture, these best practices apply and can be adapted to the specific conditions of those production systems.

Values and Guidelines

- We respect animals for their intrinsic value and recognize that each species has needs and characteristics as living beings. Our purposes for rearing them should be balanced by our respect for their own instinctive behaviors and drives. Proper attention to animals therefore requires human attention to and interaction with those animals.
- Livestock production is a valuable component of closed-loop and mixed-production systems, adding to fertility management through grazing, scavenging, and depositing their manures, as well as adding to the diversity of farm products (food and fiber). Farmers should integrate animals in proportion to the land's natural ability to support them, providing them with farm-grown feed and using the manure to cycle nutrients.
- Farmers raise only the amount of animals that the farm could feed.
- The organic approach to animal production is to raise healthy animals by choosing appropriate breeds within a species, providing an excellent diet, and through management and living conditions that prevent injury and minimize stress.
- Need for veterinary medication is minimized whenever possible. This might also result in the change of farm's design, management approach, and/or livestock choices to avoid such problems. Farmers alter their farm system design if certain health problems become a routine occurrence.
- Good living conditions lead to a stress-free environment, healthier animals, and easier care. Animal suffering is minimized when their health and well-being are given priority.
- Animals free from stress at the time of slaughter, and which are bled and handled effectively, produce a better quality product.
- The well-being of animals has a direct and positive impact of the people living and working with them.

Practice Examples

Land-carrying capacity

- Farmers raise no more animals than can be carried by the land itself. In case of deviation the farmer takes into consideration the potential impact on environmental pollution, non-renewable energy use, greenhouse gas emissions, and the nutritional profile of the animal products.
- Farmers take care to not let animals overgraze lands, which can lead to nutrient depletion and soil loss from erosion, especially in arid or sloping areas. They also take care that animals do not under-graze lands in a way that allows forage quality to decline or ecological equilibrium to be disrupted.
- Farms are able to use on farm the amount of manure they produce, without negatively affecting soil or water quality, unless there is a way to integrate the use of these nutrients locally on other farms in a way that does not degrade the quality of soil, water or crops. Use of unsustainable energy supplies or increase in carbon footprint is taken into consideration with regard to transport of manure.

Feed

- Feed is all organic, plus naturally occurring mineral feedstuff necessary for a healthy diet.
- Farmers provide animals with their most natural diet, i.e. one that mirrors their evolution, as opposed to one that favors an increased growth rate or compromises animal health. Breeds that forage easily on locally available resources reduce dependence on imported or exotic species that may be costly or not as easy to grow. Selection of breeds for efficiency of feed-conversion ratios is a valid consideration, as long as this does not unduly compromise vigor, desired reproductive characteristics, general life expectancy, or other product quality or animal welfare considerations.
- A diversity of feeds and forage types is desirable, as it provides a wider diversity of macro- and micronutrients.
    - *Exception:* In aquaculture, carnivorous fish are preferentially fed by-products of fish processing operations or other seafood components not consumed by humans. Formulation of aquaculture rations that contain agricultural products is done in a manner that balances the health of the species, feed efficiency use, and product quality.
- Farmers design their livestock husbandry systems to create an environment where animals can access their food as much as possible in the field, e.g. through grazing or foraging for insects and worms.
- Ideally, all of the feed a farm uses is grown on the farm itself or from the closest possible farms or grazing lands. Concentrates are not fed if they are not part of the animal's evolutionary development, if they detract from a needed local human food supply, or they imbalance the animal's healthy state. Diets designed to promote faster growth rates in animals may result in a higher rate of health and animal welfare problems in livestock or a negatively altered nutritional profile of the final product.
- Feeding of supplements is kept to the minimum needed to keep the animal in good health; supplement feeding to increase the "efficiency" of producing a certain amount of animal product per unit of land is avoided.

Living Conditions

Farmers minimize animal stress by:

- Providing them with an environment that allows them to express their natural behaviors, is comfortable, with access to outdoors including pasture or other species-appropriate surroundings, and also including indoor housing or other shelter if needed to protect them from undue exposure to the elements and disease vectors. They allow animals outdoor access according to the needs of the species and as much as climate conditions make this feasible.
- Managing stocking density, age and sex grouping to keep animals from harming each other to reduce incidence of disease and environmental pollution.
- Abstaining from performing mutilations unless they are necessary to protect the animals, farm workers, to control breeding, and/or to produce foods of cultural

significance. In any case, mutilations are done at age-appropriate times and in a manner that minimizes stress and suffering of the animal. Mutilations are not done to compensate for having too high a stocking density.

Health Care

- When livestock health problems arise even though proper diet and living conditions are provided, farmers treat their animals attentively and humanely. If preventative health care is not enough, they attempt natural remedies before they resort to synthetic materials unless emergency care is time-dependent for the animal's well-being and recovery.

Humane Slaughter

- The final stage of an animal's life is managed in way that causes it the least possible amount of fear, stress, and suffering.
- Transport time to the slaughter site is as short as possible.
- Transport and slaughter is managed in a way that keeps animals calm, comfortable, and as oblivious as possible about what is about to occur.
- Animals are stunned before bleeding, unless religious or similar cultural requirements dictate otherwise. If they are not stunned there should be other requirements to secure a quick and gentle death.

5. Atmosphere - Greenhouse gases and air pollution

Values and Guidelines

- Agriculture and its value chains should learn how to reduce negative contributions to atmospheric pollution and how to adapt to the changes humans are causing in the Earth's climate. Of paramount concern are the long-term impacts of various greenhouse gases (GHGs), such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxides (N_2O).
- Organic agriculture, by focusing on building organic matter in soil, sequesters carbon. Pasture-based farming systems similarly sequester carbon when managed in permanent sod. Manure management by grazing on pasture and field application of manure can also reduce atmospheric losses of CH_4 compared with confinement systems with open lagoons. In many areas there is quite a high, continuous flow/seepage of methane from deep sources. If this seepage flows through a biologically active soil, then a significant portion is converted to CO_2, thereby reducing the negative effect of greenhouse gas emissions.
- Operations should also consider how to optimize biogeochemical cycles, minimize losses, and maximize efficiency of nutrient use, particularly nitrogen. For example, by limiting N-losses to the atmosphere one might increase losses to ground water and vice versa; limiting losses on one component (such as ammonia) might induce losses of N_2O (resulting in "pollutant swapping").
- Any given link of the value chain (including farms) is responsible for understanding its own impact on the atmosphere, as regards its emissions of greenhouse gases,

pollutants, and noxious odors. An assessment of these impacts determines ways in which negative impacts can be mitigated, how positive impacts are being made, where and how improvements can be made, and on what time line. When operations select chemical agents and energy sources that do not release greenhouse gases or other pollutants into the atmosphere (such as synthetic volatile organic compounds, CFC's, HFC's) negative effects on the atmosphere are correspondingly reduced.

Practice Examples

- Farmers optimize use of trees, permanent pastures, and other perennial species to sequester carbon and reduce greenhouse gas emissions.
- Farmers optimize manure use and slurry storage and application method and timing to prevent losses of methane and nitrous oxide.
- All operations work to minimize carbon emissions from internal combustion engines. They should covert to hybrid or other alternative fueled vehicles with lower GHG emissions such as liquid propane gas (LPG), agro-fuels, or methane.
- Operators eliminate the use of all chlorofluorocarbons (CFCs) and hydrofluorocarbons (HFCs) in refrigerants and other applications.
- All operators reduce and eliminate the use of volatile organic compounds (VOCs).
- GHGs and primary pollutants coming from processing units are re-circulated or sequestered rather than released to the atmosphere.
- All operations reduce transportation distances through improved logistics and avoid energy-intensive long-distance transport.

6. Energy

Values and Guidelines

- Sustainable systems do not rely on non-renewable sources of energy and products made with help of such energy. Renewable sources of energy – whether produced by the operation itself or obtained from outside sources – are preferred over non-renewable sources.
- Sustainable systems do not rely on dangerous forms of energy. The Principle of Care indicates that the safest form of energy currently available should be used. Nuclear power is not compatible with organic principles.
- Any given link of a sustainable value chain (including farms) should assume responsibility for understanding its own energy use, e.g., source, quantity per source, and identified purposes for each quantity used. Additionally, an assessment of said use determines ways in which energy is being wasted or used inefficiently, where/how improvements can be made, and on what time line.
- Any operation that currently relies on some quantity of non-renewable energy will sooner or later be faced with the increased scarcity and/or cost of energy. Preparing as much as possible for these challenges will help assure the long-term viability of the operation.

- Development of alternative and cleaner energy provides farmers and communities with greater security in the face of global market fluctuations and scarcity. Construction and maintenance of alternative energy infrastructure should however be done with an aim to minimize negative impacts on the environment.
- All users of energy in any given locality should be aware of the needs by other entities for those supplies. Access to such resources should not be unfairly prejudiced. Overall community well-being should not be unduly compromised by the disproportionate use of resources by one or a few entities.
- Farmers growing crops for fuel production should adequately address the holistic objectives outlined in this document – in particular, whether these crops result in a net gain in energy, take away crops for food, or destroy soil or biodiversity, etc. Crops used as "fuel" ran agriculture for most of its history through the plants eaten by draft animals (or the meat and plants eaten by humans themselves); a significant portion of a farm's land was used for such purposes.

Practice Examples

- All operations strive to increase energy efficiency and reduce dependence on non-renewable sources of energy through improved technology and management techniques. They assess their operations for all points of energy use, set strategies and performance targets, and monitor their progress toward those goals.
- Operations support changes in infrastructure necessary to increase use of responsibly managed renewable energy sources. They avoid whenever possible using energy from sources that cause environmental harm, either through negative environmental impacts of their infrastructure, or other polluting characteristics.
- Operators focus simultaneously on two aspects of energy use: (i) innovation and efficiency; and (ii) preparing for scarcity. Re-designing production systems for cheap energy scarcity – for whatever purposes it is used – is a critical consideration. Operators consider on-site generation of energy via biogas, solar, wind, and/or hydroelectric. Public utilities that offer renewable energy options such as solar, wind, hydroelectric, and geothermal power may be accessible for an alternative energy supply in some regions.
- Operations strive for energy efficiency in transportation of goods and off-site storage and maintenance facilities, e.g. refrigeration of perishable goods. Farmers and other value chain actors coordinate with other operations in the locality if this affords a lower energy usage overall and does not unduly hamper market logistics.

C. Economic Dimension: Trading leads to prosperity.

Description: Value chains may be short or long. Value chain actors are necessarily dependent upon each other and should therefore be responsible for co-creating value that benefits all persons involved. They should allow their respective enterprises to thrive without sacrificing their long-term viability, the health of the surrounding environment, or human rights.

Objective: Enterprises are profitable, economically resilient, and act fairly and ethically. Value creation exists in harmony with the environment and societal and cultural development.

1. Investment

Values and Guidelines

- Paying for the true cost of food and farming improves and ensures the decent livelihoods of farmers and the vitality of farming communities. When farmers make the long-term investments needed for sustainability, forego short-run opportunities, and internalize externalities, they should be compensated by a market price that covers these costs.
- Farmers and those who buy their products should approach their business relationship as a partnership to assure ongoing exchanges over the long term, not just for one-time or isolated purchase events. When farmers, buyers, and consumers participate in a mutually interdependent and supportive relationship, the long-term stability of their enterprises is assured.
- When the cost of land makes it infeasible for some farmers to own land, a long-term lease with fair and transparent terms is a recommended option.
- Improved infrastructure enables more efficient and powerful use of human capital.
- Consumers of sustainable agricultural products should support the entire value chain through their purchases.

Practice Examples

- Investment in farming operations includes investment in the ecological health and resilience of the farm.
- The real cost of producing food sustainably is shared across the value chain, so that all necessary links – especially farmers – can stay in business.
- Any debt load is capitalized so that it allows the operator to meet current and foreseeable obligations.
- Operations show preference in the selection of their bank(s) for those that have a clear policy that supports sustainability.
- When there is no government-sponsored support, processors and/or traders invest resources in training farmers (or support for farmers organizations that provide training) in technical topics of production, including conversion from conventional to organic practices.
- Processors and/or traders invest resources in training and assistance for attaining any permits or certifications necessary for market access.
- Operators invest resources in training and/or orientation to help fulfill the relevant activities described in this document.

2. Local Economy and Economic Resilience

Values and Guidelines

- Agriculture is the base from which value chains originate. We believe that having a sufficient number of economically viable farming enterprises is a starting point for rural development. The people living and working in those places need and deserve a decent livelihood and quality of life. Such conditions make it more likely that those communities will thrive and people will want to stay there rather than migrating to urban areas in search of a better life.
- In many cultures, ownership of land often motivates a more caring partnership with the land than just being a hired laborer on that land.
- Farmers are more empowered when the level of control of their operations resides more with them than with a veterinarian, feed supplier, or the demands of buyers.
- Development of thriving and sustainable local economies occurs when sustainable, regenerative agriculture expands in that locality. Additional industry, whether it is related to agriculture or not, may also enhance the diversity and prosperity of a community, as long as it does not compromise the sustainability of the agricultural base or act to undermine human rights and human development.
- The more kinds of products a farm can sell, the less likely that its business viability will be destabilized by a crop or market failure. Each farm will determine its own limits on the diversity of products it offers to the market.
- Creating higher and preferential demand for products that are more sustainable encourages more producers to supply them. Filling the market with a higher percentage of sustainably produced products helps reduce agriculture's negative global impact.
- Empowering suppliers of sustainably produced organic goods, and assuring mutually satisfactory, supportive, and stable business relationships, affords greater economic security and allows sustainable practices to continue over the long term.
- Allowing fair competition among farmers allows more land to be managed sustainably and consumers thus have greater access to healthy products. There are no barriers and/or exclusionary practices that keep new producers out of the market.
- Beyond the farming sector, the agricultural base provides potential for a diversity of value-added farm goods. Such operations offer additional jobs and outlets for creativity and bring greater income to the community. More distant buyers can encourage and support value-added processing and manufacturing in the local economy. In contrast, it is generally less appropriate to import raw materials from a given farming base, process them into value-added goods, and re-sell them to the original base at a profit. The opportunity to gain that value should stay in the community itself.

Practice Examples

- Buyers support rural economic development through enhancing farm ownership/dominion, preferring agricultural situations that support farm ownership

(or similar dominion such as cooperatives, secure tenure, and use of land held in a community trust).

- Buyers use the most local/closest sources possible. They deviate from this pattern only if a more distant source better meets the overall sustainability criteria described in this document.
- Buyers have an order of preference for sourcing their ingredient purchases. Buyers have a way of discerning how different farms "rate" with respect to sustainable development practices, and apply those criteria by assessing farm progress/ improvement and overall performance.
- Farmers strive for a balance of income streams to help ensure the stability of their business and income. This can be achieved through:
  - Selling diverse products through a variety of markets;
  - Selling directly to customers in a way that captures the added value of the chain;
  - Maintaining community food security and food sovereignty by selling to local markets and donating surpluses to help the least advantaged in the community;
  - Providing services to society such as agro-tourism and education.
- Buyers who support sustainable development strive to increase the diversity of product sources they can use, in terms of:
  - The number of suppliers – by increasing their own downstream market demand for certain kinds of ingredients/products, they are increasing the absolute amounts needed of any given kind of product;
  - The diversity of farm products – by opening more markets for different kinds of products, and innovative product formulation that calls for higher demand of lesser-used or less-known ingredients;
  - Tolerance for and support of diversity in crop production, even within a given species of crop; differences in size, shape, and other gross characteristics of produce from farmers' harvests that reflect the diversity of nature should be acceptable and marketed with equal enthusiasm. (*Note: This does not mean that products of unacceptable ripeness, damage, or taste must be bought from farms if there is no practical way to use them, nor does it mean that buyers cannot express their preferences and work with farmers to deliver on these).*
- Farmers exercise responsibility for the quality of their produce.
- Processing equipment is not of such size or other design constraints that it requires huge volumes of mono-cropped or identical varieties in order to operate. Processing and handling operations and buyers are able to work with farms of varying size, with clear tolerance for smaller holdings.

3. Markets and Trade

Values and Guidelines

- More realistic pricing is educational to consumers and also an influence on their purchasing decisions toward more sustainable choices. Consumers can only

understand such rationale for pricing if there is enough information provided to them about the product qualities and how it reaches the market.

- In order to help lead consumer habits and buying patterns toward increased sustainability, information should be "part" of the product. This information that sellers provide should steer consumers toward making choices that are more sustainable. The information should transparently reflect or explain the sustainable development choices that the seller is making, as they source goods from the value chain and decide on what to actually offer to the market. This information should be easily and immediately accessible to the consumer through on-product labeling to the extent that space allows and otherwise through printed and/or electronic product and company descriptions.
- As a general rule, the fewer the links in the value chain, the easier it is to provide the information described above to consumers. Fewer links in the value chain means greater value shared by those links, compared to a similar chain with more links. Generally, farmers can gain more income by participating in shorter value chains.

Practice Examples

- Processors and Sellers of sustainable products:
  - Provide high quality products demanded by their customers;
  - Conduct market research to better understand such demand and trend patterns;
  - Innovate and improve products to offer to the market;
  - Educate consumers about the benefits of choosing sustainably produced goods;
  - Price products according to the real costs associated with producing them.
- Basic marketing and sales information includes the following aspects, which could be found on a product label or otherwise, such as through a website or other marketing materials:
  - A full and complete listing of all materials found in the final product, including minor "unavoidable" components of processing aids and additives;
  - Products or ingredients have their most commonly recognized names. Masking the identity of an ingredient or product for the purposes of increasing sales or deceiving/misleading consumers does not occur; an example of an unacceptable practice is calling refined cane sugar "evaporated cane juice";
  - All sold product comes with some indication or code that allows for traceability through the value chain. For fresh product sold by farmers at a farmers market, a written code is not necessary as long as the buyer knows who the farmer is;
  - Source(s) of ingredients – including country(ies) of origin, farmer(s) involved, traceability of the goods including length (or number of links) in the value chain.
- In addition to the section above on basic product and company information, marketers provide additional information to consumers to educate them about more sustainable purchasing and consumption habits.

4. Materials and Contaminants

Values and Guidelines

- In a truly sustainable, regenerative system, "waste" does not exist. The implication is that everything is used, and when that use is exhausted, the material components get transformed or absorbed into another part of the system in a beneficial way. Reducing both the demand on natural resources and the impact of discarding the waste is a practice that all people and organizations on the planet should adopt. Leading by example is not only good for the planet, but, as consumers become more aware of these issues, it is good for business.
- Making use of agricultural byproducts from organic processing as feedstock for soil nutrition boosts agricultural productivity and eliminates costs and impacts of its disposal otherwise.
- To help minimize waste of farm produce, size and shape of fruits and vegetables should generally not be grounds for rejecting them from the market.
- Using only materials from sources where social justice is a priority helps assure that people's lives are not adversely affected in the use of those materials.
- Reducing the use and incidence of toxic materials reduces the negative effects they may have on soil, water- and land-based life forms, including humans.
- Farms and their workers should not be penalized or have to suffer – officially, legally, economically, or physically – for the trespasses of polluting neighbors.

Practice Examples

- The sources of non-renewable materials are important to consider, since extracting them from the earth can have significant environmental impact. Often it is difficult for farmers to know the real source of the inputs they purchase. Best practice suggests that farmers inquire with suppliers to avoid using materials that:
    - Are extracted from protected environments or high conservation value areas, including (but not limited to) coral reefs, primary forests, or protected wildlife habitat;
    - Are from mines or other sources known to have a destructive effect on their local environment beyond the borders of the extraction sites themselves, including water supplies, flora and/or fauna, and human populations;
    - Are from sources where basic human rights are violated.
- No materials that are suspected of having high levels of contaminants such as pesticide residues, GMOs, or heavy metals are used. Suppliers and farmers investigate the source of materials to determine any possible threat of contamination, and guide their choices accordingly.
- Farmers minimize the negative environmental footprint of transporting the materials from origin to place-of-use with preference given to closer sites, as long as they fulfill the aforementioned criteria.
- Processing operations integrate their product streams with farmers and/or operations so that agricultural by-products of the processing stream are not wasted. They instead are kept free of contaminants and returned to farmers or other

operations for re-assimilation, either as soil amendments or animal feed, or otherwise as appropriate.

- Packaging materials are minimized. In order of preference: reused and then recycled materials are preferable, and these are also reusable, recyclable or compostable.
- Use of toxic substances is minimized to the lowest level deemed necessary.
- Operators do not use synthetic and residual toxic substances on farmland or surrounding natural areas. They may however need to use toxic materials like equipment cleaners, automotive fluids, etc. They avoid contact between all toxic substances and soil, water, animals, or harvested products.
- Any materials an operator releases into the environment are substances known to break down into components that are non-toxic at the time they re-enter land and water systems. Any other materials are disposed of in a manner that avoids environmental pollution or adverse health effects.
- Handlers use biocides as a means to ensure good hygienic conditions and food safety only if non-material practices are proven to be ineffective and/or if the use of these materials proves significantly advantageous as regards other environmental impact factors described in this document. In all cases, the materials used conform to the criteria as described above (ability to biodegrade, etc.).
- All links of the value chain handle durable products used in their operations in a way that cares for their end of life/long-term usability. The range of items is wide – from those meant to last only a short time, e.g. non-rechargeable batteries, pens, etc., to those that last a bit longer, e. g. irrigation tubing, pallets, etc., to those meant to last many years, e.g. a machete, shovel, milling machine, or vehicle. Those items that are not reusable or recyclable are disposed of in a manner that avoids environmental pollution or adverse health effects.
- Farmers are aware of the contamination threats posed to their operations. They pay attention to contaminants that could enter the farm via:
    - Air (e.g. wind drift from nearby farms and other establishments, governmental aerial spray programs to control certain pests, GMO pollen drift, etc.);
    - Water (nutrients, pathogens, pests, weed seeds, or other contaminants in irrigation, or ground water);
    - Inputs
- Farmers strive to have open and regular communications with the different parties who may contribute to contamination with the aim of avoiding exposure of the farm to contaminants. Such parties include but are not limited to:
    - Neighboring farms, factories, or other installations;
    - Government offices responsible for mandated chemical application programs.
- While acting within the law, operators organize with each other and with like-minded organizations to counter contamination threats they have in common, e.g. polluting factories, large conventional farms, proliferation of GMOs, etc.
- In addition to basic diligence as described above, farmers employ physical practices as needed or helpful in avoiding contamination, such as:
    - Constructing dams, ridges, or diversion canals;

- Establishing buffer zones and/or living barriers such as tree stands or hedges;
- Erecting wind vanes or similar implements to detect wind patterns.

D. Cultural Dimension: Inspiration, innovation, leadership, and altruism are enabled. Communities are stable and thrive.

Description: Personal growth and satisfaction requires that one is able to connect to one's own sources of inspiration. The ideas and actions of individuals working alone or with others form the source of continued improvement of the quality of life on Earth. Personal and communal developments are interdependent phenomena.

Objective: Individuals' ideas are encouraged for personal fulfillment and benefit of the group. Holistic development of values, knowledge, capacities, and consciousness is ongoing for individual empowerment and societal benefit.

1. Personal Growth and Community Development

Values and Guidelines

- Diversity of cultures and knowledge systems provide a wealth of ideas, innovations, sense of identity, and cultures adapted to different locales. Exchanging this wealth of knowledge provides communities with further insights about ways to enhance the quality of life through culture, art, philosophy, and the sciences.
- Culture reflects the inspiration, ingenuity, creativity, leadership, and cooperation of individuals in community. We value and strive to nurture the continual wellspring of ideas and innovation needed to meet the ongoing challenges society faces.
- Leadership comes from independent thought and action. We support activities and organizations that encourage and empower individuals to generate and share diverse ideas, demonstrate learning and knowledge, and contribute to the well-being of families, organizations, and communities.
- We are concerned that the increasing flight of people from rural areas to urban areas is destabilizing to both areas. Loss of people in rural areas drains those areas of labor power and diversity in terms of ideas, innovation, inspiration, activities, and employment opportunities – all of which in turn can lead to impoverishment of culture. On the urban side, an influx of new residents puts strain on infrastructure and public services. It can also cause increased competition for employment and/or result in greater overall unemployment conditions that create even more imbalance between densely populated areas and the rural agricultural supply base on which they depend. Slowing or reversing trends of urbanization through rural cultural enrichment would lead to greater overall sustainability and the regenerative potential of regions.
    - Assuring intergenerational continuity on the farm and in the community is an important factor in maintaining the knowledge and culture of practices needed

for ongoing vitality. Local production sustains and renews local skills. Unused skills are soon forgotten.
    - We also support systems that encourage and assist new farmers.
- Enhancement of the quality of life in rural areas and farming communities depends on several factors. Culture and tradition originate from the land and the people living on it, but regeneration from within, as well as healthy relevant linkage to, and support from, the outside world is necessary for continuity. Different cultures can also enrich each other. This is most appropriately achieved by each culture respecting the other and refraining from insisting its own attributes become the dominant paradigm.

Practice Examples

- Value chain actors respect indigenous knowledge and intellectual property rights, recognize the source and value of traditional and cultural knowledge and technological innovations, and compensate their sources fairly, on mutually agreeable terms.
- Value chain actors participate in public policy debate and/or try to influence public policy in the direction of sustainability and support of local cultural and community development, as much as their resources allow.
- Value chain actors work to improve the quality of life for the people and communities that produce the products. The value chain actors in the locality itself should be regularly involved in these efforts as responsible members of their community. Ideally, value chains actors who purchase goods from distant communities also assist in developing those agricultural communities, as well as their own communities. There are various ways that value chain actors can support and enhance personal and community development, such as:
    - Encouraging and providing opportunities for employees to pursue their own personal development as part of their work duties;
    - Promoting the education of people within enterprises in their value chains and communities, covering a range of topics, including but not limited to:
        - Capacity building for better farming, processing, handling, and business practices; value chain actors who hope to increase the productivity and regenerative capacity of farms share knowledge and educational resources to those ends; they should also encourage farmers to be creative and innovative;
        - Improving schools for children and adults, for general learning beyond agriculture and value chain topics;
        - Supporting research centers, study centers, and/or experimental stations;
        - Supporting and using job training centers;
        - Public awareness-raising campaigns about sustainable development and its benefits (as well as other topics).
    - Infrastructure: Within their means, sustainable development value chain actors make contributions to the provision of public services and facilities that the community decides it wants. These could be water systems, roads,

communications systems, energy utilities, etc. *Note: This does not mean the value chain should be primarily responsible for such activities in place of the government, but when government support and action are absent or deficient, the value chain could make efforts toward planning, petitioning the government for support, and/or actually creating the infrastructural components.*

- Value chain actors support community cultural development through a variety of ways, including but not limited to:
  - Organizing, supporting, or participating in traditional celebrations and rituals;
  - Respecting and sharing local foods and supporting their continuance;
  - Respecting local clothing, and supporting its continued creation and use;
  - Supporting the arts and music;
  - Supporting programs and events that share local lore, history, and stories.

2. Food Security and Food Sovereignty

Values and Guidelines

- Adequacy of the food supply in any given locality is a precursor of broader social and political stability.
- Food sovereignty implies that the right of all people to pursue their own food production and consumption choices is not compromised.
- Sustainable diets are often associated with eating locally for health and food security reasons as well as to help the local economy. The local availability of a wide diversity of (traditional) products affords more complete nutrition, and also reflects and supports the continuance of the cultural and/or traditional mores of the population.
- Reliance on tenuous infrastructure to supply one's daily food or to sell one's farm products at large distances is inherently risky. In addition to providing a more balanced diet, growing a variety of products contributes to stability of the farm business. Diversification of products and therefore income streams mitigates the risk of relying on only one or a few crops/products for income. Such diversity is a buffer against crop failure or market volatility (for example, due to glut and/or collapse).
- Sharing resources strengthens communities and creates synergies among farms.

Practice Examples

- In places where food security is a problem, the enterprise (farming or other value chain actor) contributes to the food security of its personnel, their families, and the local community.
- Although complete subsistence or self-sufficiency may not be necessary, farming enterprises help assure the food security of the farm and its workers from year to year. Providing a substantial share of the farm owner's/family's own food from locally produced sources is one way to accomplish this.
- In regions where it is recognized that hunger or access to adequate food and nutrition is a problem, the priority of supplying food to the market expands from the closest neighbors outward geographically, from farm family to village or town, to

region, to nation, and then beyond. In the face of local/regional hunger, farmers enable the farm to provide for their own family's survival and that of their community as a priority over gaining income from export or more distant markets. *Note: This does not automatically imply that the amount of any given crop that gets consumed locally must be greater than the amount exported.*
    - Supplying nearby urban populations with a steady source of food for a balanced diet is a corollary goal, but one that must be facilitated by government policy that enables development and enhancement of such supply.
- Farmers strive for diversity in their own production and coordination with other production units in the local area to help establish food security and food sovereignty. Groups of farmers or farming communities may successfully trade and integrate their crops to achieve food security and food sovereignty simultaneously.

3. Product Quality

Values and Guidelines

- Organic agriculture and the healthy soil it fosters contribute to higher nutritional value and improved taste of produce. These benefits are strong motivators in the marketplace and contribute to human health and enjoyment.
- Processing agricultural products has been occurring and evolving for millennia. Traditional, historical, and anthropological motivations for this essential human activity include:
    - To enable people to keep food products in usable form until the next harvest, including methods such as drying, smoking, salting, or and pickling;
    - To transform the product into something more nutritionally valuable or stable, and/or possibly with a different nutritional or sensory profile using methods such as culturing or fermentation;
    - To change the form of the product to allow it to be to make it easier to eat such as by grinding, cutting, or other physical manipulation, or by heating/cooking;
    - To separate or extract parts of the whole food, such as by distillation, pressing, sieving, or filtering.
- While changes in our understanding of food and health may suggest moderation of some people's consumption of certain kinds of products, this does not invalidate the importance such products still have in perpetuating the cultural identity of certain groups. We value the authenticity of food as a mark of culture and quality of life.
- While acknowledging cultural traditions, we are also aware that diets across the world are changing. In particular, we are concerned about the increasing consumption of refined sugars, carbohydrates, and other demineralized and/or highly processed foods, which are leading to widespread problems such as malnutrition, obesity and type 2 diabetes.
- The use of formulations containing preservatives and/or modern synthetics for profit, convenience, or to mimic other products that are commercially available is not compatible with the Principles of Organic Agriculture.

- Food processing additives used historically or traditionally – for longer than approximately the past 60-70 years – reflect the cultures that developed those food products. We recognize that modern technology has developed new sources of these traditional additives with equivalent or superior consequences for the final product, the environment, and/or product performance. Examples include a purer form of a caustic substance (e.g. potassium hydroxide or sodium hydroxide instead of leached wood ashes) or a purified strain of a microbial culture.
- Providing the market with more and healthier products is a social benefit. Keeping traditional methods supports cultural identity and diversity and retains cultural knowledge.
    - Because organic farming prohibits use of pesticides, there is inherently less risk of toxic residues on the raw product.
- When farm or food processing workers are well trained, highly motivated and respected, the products are likely to be safer. Careful production on farms and in processing units avoids contamination of products by pathogens and toxic chemicals. Food safety risks are reduced when preventative practices that minimize the root causes of the problems are in place.
- Products formulated deceptively or adulterated to provide otherwise absent characteristics undermine consumers' rights and abilities to make informed choices.
- Nature provides more usable products than the mainstream commodity market actually uses. Expanding our knowledge of available ingredients and encouraging their production will help restore diversity in trade and on farms and broaden our agricultural base. Flooding the market with products made from fewer crops and/or with synthetic materials potentially harmful to human health works against this benefit.
- The effort to move consumer habits and buying patterns should include information about the product. This information should be conveniently accessible to the consumer through measures described above.

Practice Examples

- Farms contribute to:
    - Continued local availability (or revival) of foods traditionally and/or culturally valued by the population in question;
    - The supply of food and fiber for the local population.
- Processing of food is kept to a minimum and performed in a natural way. Appropriate technology is used to help retain the nutritional value of foods and their inherent flavor profiles.
- Processed foods are formulated and manufactured in ways that respect cultural heritage and minimize loss of nutritional value.
- Substances and techniques are not used in order to reconstitute properties lost by the processing and storage of organic products, conceal negligent processing, or be otherwise misleading as to the true nature of the product. Criteria for choosing processing aids and additives consider the formulation necessity, environmental impact and health effects of using such materials.

Note: When additives are required by law (e.g. vitamins and minerals) natural forms are used in preference to synthetic forms, or forms that have synthetic components (e.g. preservatives).

- Natural flavorings are not used in product formulations as a substitute for actual agricultural ingredients in any situation where it is feasible or traditional to include such agricultural ingredients.
- Choice for all additives and processing aids used considers the environmental and social impacts incurred by their manufacturing processes.
- As much as possible, manufacturers avoid transforming agricultural ingredients into synthetic ingredients and then using them in formulations in place of natural ingredients that have similar characteristics, for example transforming coconut or palm oil into synthetic cosmetic ingredients instead of sourcing less common oils such as jojoba oil, argan oil, shea butter, etc.
- All processed foods are labeled to clearly indicate all materials present in the final product. This includes "incidental" or "unavoidable" processing aids that are present in the final product, either in their original form or having combined or reacted with other ingredients.
- All workers are educated about the relevant risks to food safety inherent in their operations and given means to minimize those risks.

E. Accountability Dimension: People are accountable for their actions; actions are taken in a transparent manner; stakeholders are encouraged to participate.

Description: Sustainability requires accountability and transparency. Consumers must be empowered to make informed purchasing decisions. A comprehensive accounting of all dimensions of sustainable development available to all stakeholders, and open communication channels allowing for continual improvement, are essential aspects of sustainable development. Continual improvement is enabled by evaluating one's own activities and by receiving the critique of others.

Objective: Comprehensive and transparent reporting and communication processes help stakeholders address all relevant dimensions of sustainable development. Performance, ongoing improvements, and shortcomings are qualitatively and/or quantitatively demonstrable. Sharing knowledge is seen as everyone's responsibility to society at large.

1. Holistic management

Values and Guidelines

- Each link in the value chain has an impact, and the successive links in the value chain of any given product have a cumulative impact. When evaluating the product's overall environmental and/or social impact it is necessary to consider the sum of

these impacts. In terms of sustainability, business success is only accurately measured by taking into account direct and indirect external effects across all sustainability dimensions.

- Larger operations need more formally developed governance and due diligence procedures. These procedures should take into account the complexity of the operation and avoid creating excessive bureaucracy or paperwork for anyone, especially smallholders
- Sustainability implies responsibility. This is organized across and among members of any given value chain. Transparency across the chain is therefore an important component in enabling any given entity to understand their participation with the rest of the value chain.
- Different materials can have different system boundaries. Products that consist of materials with multiple components may likewise have different component system boundaries.

Practice Examples

- The boundaries of the system are defined to encompass any movement of material from origin to final dissolution or deposition.
- Downstream links in the value chain are responsible for knowing and making transparent the cumulative impacts that precede and include their own activities. In particular, attention must be given to the way these impacts relate to claims about their degree of sustainability.
- If any link in the chain is known to have practices that violate basic human rights or otherwise significantly undermine the spirit of these best practice guidelines, the other links in the chain cease cooperating with the offending link. *Note: The interpretation of this is up to each operation, but operations are transparent enough that others could question practices if they want.*
- Enterprises publicly promote explicit sustainability objectives and describe their means of implementation, verification, and strategies for proactively addressing major sustainability challenges.
- All relevant sustainability categories are managed effectively and holistically; trade-offs among sustainability dimensions are responsibly managed and synergies with partners re-enforced to address "hot spots."
- The value chain considers all costs when evaluating the overall sustainability of a product. Externalities whose direct costs are not normally included in the price of the final product are counted as internal costs.

2. Transparency and reporting

Values and Guidelines

- All value chain actors should be committed to transparency in their activities. Real transparency reflects sincerity of purpose, desire to communicate and form relationships, openness to receiving feedback, and willingness to improve.

Transparency also entails that the reporting as described in this section be publicly available. Transparency is only valid if it clearly states which aspects are being covered and for which actors in the value chain – and which are not – based on the full range of topics under discussion.

- Market expectations may lead some consumers or markets to require farmers and other value chain actors to participate in additional assurance programs such as participatory guarantee systems or organic certification. Farmers selling at local farmers' markets or local stores may be able to gain the trust and support of customers by verbal exchanges, or inviting customers to the farm. Familiarity with and knowledge about upstream links in the value chain tends to engender more trust and demand less documentary evidence.
- Communications about activities related to sustainability serve several purposes, including but not limited to:
  - Providing a detailed accounting of one's accomplishments, challenges, and plans, i.e. a historical account, so these can be self-reviewed or reviewed by others;
  - Reporting one's achievements, challenges, needs, and plans to help customers make informed purchasing choices;
  - Educating practitioners, researchers, policy makers, or other entities not directly involved in the value chain.
- Indicators and metrics are valuable tools for monitoring and reporting both improvement and absolute performance. Taking initial baseline readings enables one to evaluate progress made over time. Being clear about goals and ensuring they have relevance both within and outside the organization affords broader scale learning and exchange with like-minded organizations. Meeting the objectives discussed in this document should be the ultimate goal of these exercises.
- Full-cost accounting and life-cycle analyses can reasonably be expected only from larger companies. Reporting and accounting should not be an unnecessary burden for any entity. Generally speaking, the larger the sphere of influence an entity has, the greater the need for reporting.
- In addition to each operator doing his/her own monitoring and evaluation, comparing measurements of one operation to other operations, or to an objective set of sustainability goals or performance metrics (or default values) may be useful. This allows one to judge performance against a broader norm or on a sector- or activity-wide basis.
- Measurement of performance on a given aspect against a common benchmark or standard (or default value) can be used, for example, to:
  - Compare the impact of one's activities with others doing the same kind of work;
  - Compare the collective performance on one or more practices or aspects of production, by producer type (e.g. organic producers, coffee farms, or a type of processing operation) against similar ones of another sector (e.g. conventional producers, sugar cane farms, or a different type of processing operation).

Practice Examples

- All value chain actors evaluate their performances and strive to improve their operations, to achieve the objectives discussed in this document.
- For any system under review, the boundaries and scope of the reporting are made clear, i.e. what is covered versus what is outside the reporting scope. If an organization does not address all of the issues described in this document, they justify those omissions.
- Operators choose indicators and metrics that address the full spectrum of sustainability issues mentioned in this document. It is important that the approach and methodology is clear, and that the indicators and metrics are linked to, or lead to conclusions about meeting the objectives mentioned in this document.
- Operators compare initial readings of activities against measurements taken at later dates. They link their baseline measurements to targeted areas of improvement, and develop action plans to meet those goals. They then evaluate progress against these action plans and transparently report the results –including any observed or suspected unintended negative consequences – and also describe corresponding follow-up actions.
- All value chain actors are able to map their respective supply lines. It is common however in business relationships to protect one's sources or customers against competitors. Such confidentiality can be respected as long as there is sufficient and credible transparency in the report on the assessment and performance of the value chain (including providing consumers with adequate information to make informed purchasing choices).
- Participants in the value chain compensate for the negative environmental impacts of using non-renewable energy, emissions of greenhouse gases, emissions, or releases of toxins to the environment during any stage of production or the value chain, including transportation and storage. Valid compensation includes but is not limited to buying carbon offsets, establishing biodiversity areas, direct environmental cleanup of affected areas and systems, and investing in related research by non-profit institutions.
- In benchmarking, operators transparently justify their choice of any benchmark or default value based on pre-set criteria for making such choices. The figures they choose are broadly acknowledged and subjected to peer review and ongoing revision as the scientific community gains more data. The limits of the ensuing evaluation and the aspects of best practice (as described in this document) not covered are explicit.
- Any claims to having fulfilled the best practices aims elaborated in this document meet the expectations for reporting described in this section. Ultimately, the intention behind reporting is to assist value chain actors in presenting a credible report describing the degree to which they are meeting the objectives outlined in this document.

3. Participation

Values and Guidelines

- Participation is relevant for all supply chain levels. Smallholder participation in value chains should be supported by their own cooperative organizational structure or that of another organizational structure.
- Nurturing cooperative relationships is more likely to occur when face-to-face interactions allow each side to see the humanity of others.
- A best practice approach to a complaints system is to make transparent all complaints and inquiries received, and the responses or resolutions to them. There may be cases where certain parties are allowed anonymity in published reports if this protection is appropriate and as long as the actual names are not lost.
- Corruption due to conflicts of interest is ethically unacceptable.
- It is often difficult for an individual operator to feel s/he can make a difference against a broader societal "system" or norm of behavior, but collective efforts are more likely to have power and effect.

Practice Examples

- All stakeholders substantially affected by the enterprise's activities are identified and then empowered to share in decision-making about activities impacting their lives and environment.
- All stakeholders have access to appropriate grievance procedures without a risk of negative consequences.
- Prior to making decisions with potential major and long-term sustainability impacts, enterprises perform due diligence and make relevant results accessible to affected stakeholders. Enterprises should proactively identify, inform, and empower potentially affected stakeholders to share their views, including representation of those unable to claim their rights (e.g. nature, future generations) through suitable means.
- Conflicts of stakeholder interests are resolved through appropriate direct or mediated dialogue based on respect, mutual understanding, fair conflict resolution, and equal power.
- All sustainable value chain actors are open to receiving feedback about any aspect of their operations. They invite inquiry, requests for more information or clarification, and information about perceived problems, and respond accordingly. This system is publicly available, through sales and marketing information channels, and accessible through the internet and/or other easily accessible media.

Annexes

Annex 1 – Definitions

Additive – A material added to a product formulation to alter, improve, or otherwise change the properties of that formulation.

Agriculture – primary production of food and fiber at the farm level, including crops and/or livestock production, as well as apiculture, aquaculture, mushrooms and other non-plant and non-animal products, and intentionally planted (and managed) forests.

Agro-forestry – a production model that integrates tree species with production of other agricultural products, into a multi-story system.

Biodegradable – ability of a material to break down through naturally occurring biological decomposition into components that are normally found in the natural environment.

Biodiversity – the range of species and varieties of organisms in any given ecosystem. Biodiversity contains and must be considered on both macroscopic and microscopic scales.

Buyer – an entity that purchases a product from another entity in a given value chain.

Consumer – the buyer or user of a given product. The end consumer is the party that is the last to buy or obtain a product from a value chain.

Culture – the collective way of life built over generations by an identified group or society. Defining features of a culture include one or more of the following: language, food, clothing, religion, philosophy, arts, music, architecture, agriculture, business structures, governance structures, celebrations, rituals, and other social interactions and customs.

Development – In terms of sustainability, development refers to positive changes made to any system leading to regeneration and greater health with enhanced capacity for sustaining greater quantity and quality of life.

Discrimination – biased practice with respect to hiring, compensation, access to training, promotion, termination or retirement that is based on race, caste, national origin, religion, age, disability, gender, marital status, sexual orientation, union membership or political affiliation.

Eco-intensification (ecological intensification) – optimization of the performance of ecosystem services. These services include pest and disease regulation, water holding

and drainage, soil building, soil biology and fertility, nutrient cycling, nitrogen fixation, photosynthesis and carbon sequestration, multiple agricultural crop and animal species, pollination and others.

Edge effect – a phenomenon in which a relatively greater number of biodiversity interactions are occurring at the interface of wild and farmed areas, compared to those occurring wholly within the farmed area.

Equity - the quality of being fair or impartial; fairness; impartiality.

Exotic – originating from another ecosystem.

Externalities – costs or negative impacts on ecosystems or people not accounted for in the price of, or impact caused by, a product or production system.

Feed conversion ratio – the amount of feed an animal must receive in proportion to the weight of usable product that animal yields.

Food safety – absence of pathogenic organisms and/or chemical toxins in a food, or present in levels that are below human health concerns.

Food security – ability of any given person, group, or community to have culturally acceptable food of sufficient quality and quantity to meet nutritional needs, without having to come from emergency sources.

Food sovereignty – independent dominion and ability of any given person, group, or community to provide for itself food of adequate quantity, quality, and variety to afford a complete diet.

Functional diversity – diversity in which the different species or components interact in primarily positive ways – in contrast to "random diversity."

Genetic Engineering - a set of techniques from molecular biology (such as recombinant DNA) by which the genetic material of plants, animals, microorganisms, cells and other biological units are altered in ways or with results that could not be obtained by methods of natural mating and reproduction, or natural recombination. Techniques of genetic engineering include, but are not limited to: recombinant DNA, cell fusion, micro- and macro-injection, and encapsulation. Genetically engineered organisms do not include organisms resulting from techniques such as conjugation, transduction, and natural hybridization.

Genetically Modified Organism (GMO) - a plant, animal, or microbe that has been transformed by genetic engineering.

Greenhouse gas - gaseous molecules, either naturally occurring or man-made, known to contribute to global warming, including but not limited to carbon dioxide, carbon monoxide, chlorofluorocarbons, hydrofluorocarbons, methane, nitrous oxide, ozone, perfluorocarbons, sulfur hexafluoride, and water vapor.

Greenhouse gas emissions – production and release of greenhouse gases into the atmosphere.

Harvested product – any product taken from a given agricultural production unit.

High Conservation Value Area (HCVA) - an area that has been identified as having outstanding and critical importance due to its environmental, socioeconomic, biodiversity, or landscape values.

Hot spot – points in a value chain or production system identified as having significant environmental impact.

IFOAM –The International Federation of Organic Agriculture Movements – (www.ifoam.org).

Indicator – evidence of a given phenomenon. Indicators are usually qualitative. (See definition of "metric" for contrast.)

Livestock – animals raised on a farm for the purpose of farm work, sale, food, fiber, manure or other animal products.

Local – pertaining to a delineated ecosystem and/or economic system restricted to a relatively small scale and defined in contrast to neighboring areas.

Metric – a quantitative means of measuring performance.

Modern – having occurred or been introduced later than the past 70 years.

Mulch – a covering of the soil used to retain moisture, protect from the elements (sun, wind, rain), suppress weeds, and conserve or build soil organic matter.

Multi-story – having more than one stratum of production, such as practiced in agro-forestry management

Native forest - areas of native vegetation of 1 hectare or more, with canopy cover of more than 35 % and at least 10 trees per hectare that reach 10m in height or are able to reach these thresholds *in situ*, i.e. in that soil/climate combination.

Natural – not synthetic, or non-synthetic; not man-made; readily found in the environment, and/or made through a process that begins with materials found in nature and not transformed except through naturally occurring biological processes.

Operator – The physical or legally responsible party that produces, transforms, and/or trades organic products.

Precautionary Principle – an approach that puts the burden of proof about the (short- and long-term) safety of any given innovation on the party introducing it, and restricts its release into an uncontrolled environment until such proof is broadly accepted.

Processing – any packaging, labeling, or transformation of harvested goods, other than physical sorting and/or washing with water.

Processing aid – Any substance or material, not including apparatus or utensils, and not consumed as a product ingredient by itself, intentionally used in the processing of raw materials, the product or its ingredients, to fulfill a technical purpose during treatment or processing and which may result in the non-intentional but unavoidable presence of residues or derivatives in the final product. This includes filtration auxiliaries.

Recyclable – having the capacity to be reused in its same form, transformed into another usable product or material, or biodegrade. The claim of being recyclable is not valid if it applies only theoretically to a given product and/or situation, i.e. it must actually be possible to recycle it; the user must be able to bring the material somewhere and/or do something with it. The process of recycling must occur within a reasonable or relevant timeframe, such that it does not become waste.

Regenerative – able to produce more of its own kind.

Right livelihood – a standard of living that affords adequate food, shelter, clothing, health, employment, and educational opportunity for people and their immediate families. Right livelihood also implies the absence of significant adverse effect outside the immediate family (community/environment) and, ideally, substantial positive impacts thereon.

Rural development – the enhancement of cultural, social, economic, and environmental activities in primarily agricultural areas and communities.

Smallholder – (i) A family-labor based farm providing food subsistence and some cash crops for basic household needs; (ii) A farmer who owns and/or manages a tract of land sufficiently small to be run by him/herself and immediate family members and/or with the equivalent amount of hired help.

SOAAN – The Sustainable Organic Agriculture Action Network (http://www.ifoam.org/growing_organic/Best_Practice_Program/index.php)

Stakeholder – a person or group that has an investment, share, or interest in an organization, ruling, outcome, etc.

Sustain – to keep from failing; to keep up; to prolong.

Sustainable development – a term that reflects the idea that sustainability is an ongoing process toward a goal; while no operation may be completely sustainable, it may pursue that goal by actions that develop and manifest increasingly sustainable characteristics.

Sustainability – a concept signifying that the activities can be done indefinitely without compromising the ability of others to also conduct their respective activities. All such activities must fit within the global capacity of the Earth to support them collectively. Sustainability encompasses ecological, social, economic, cultural, and accountability dimensions.

Synthetic – made by humans through chemical changes not induced through naturally occurring biological processes.

System boundaries – Boundaries for which processes in a product's life cycle are defined, for the purpose of performing a life cycle analysis or otherwise understanding the interactions involved with that product.

Toxin – a chemical or biological material detrimental to one or more life forms, ecosystems, or ecosystem components; having toxic properties. Examples include heavy metals, pesticides, organic solvents (such as benzene or carbon tetrachloride), products of molds (such as aflatoxins or patulin), bacterial products (such as botulinum), certain nanomaterials, and certain byproducts of GMOs. Some materials are non-toxic at certain concentrations and toxic at others.

Traditional – not modern, i.e. more than 60-70 years old.

Value chain – the sequence of parties involved in the production and trading of a product, whereby the service rendered by each link gains value commensurate with the service rendered.

Waste – The remainder of any material used by humans and for which there is no further use.

Sustainable Organic Agriculture Action Network (SOAAN)

For more information:
Go to http://www.ifoam.org/growing_organic/Best_Practice_Program/index.php.

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