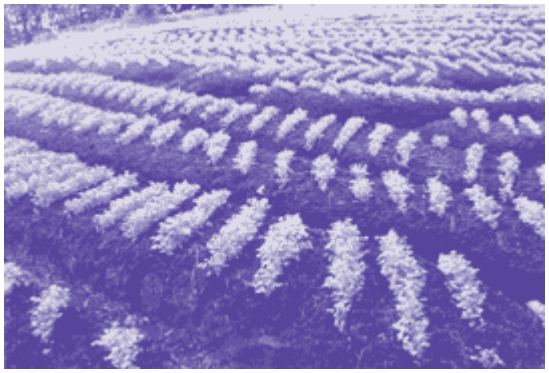
COMUNIICA, Año 5, N°17, 2001, p. 3-7

Pedro Cussianovich IICA Representative in Costa Rica

An Approach to Organic Agriculture



Ever since the mid-1950s, with the introduction of the "Green Revolution", there have been many changes in agricultural production. This agricultural philosophy arose with the purpose, among others, of increasing agricultural productivity and profitability through an intensive use of synthetic agro-chemicals. By applying these products, there was an accelerated growth in yields and areas under cultivation. However, this also led to the deterioration of natural resources, threatening sustainability of the productive system and the health of the population in general.

Society's awareness of the risks for human health and the environment arising from an excessive use of synthetic agro-chemicals and inadequate natural resource management, led to a search for alternative production technologies which would counteract these effects. This gave rise to several different philosophies, among which the most outstanding are organic agriculture, biodynamic agriculture, permaculture, appropriate technology, and agroecology, to cite a few.

In this context, organic agriculture, known as the oldest production technology on earth, gained renewed importance. This technique is based on respect for the relationships that exist in nature, a principle fostering natural resource and environmental conservation, which produces contributions to the health of the farmers and consumers, by developing agricultural production systems based on an ecological, economic, and social equilibrium

In addition to the attributes indicated above, which undoubtedly contribute to an improvement in the quality of life in rural areas and of society as a whole, organic agriculture also delivers one of its most significant contributions to agricultural sector development, by promoting, on a day by day basis, a revaluation of the farmer's most important and perhaps sole patrimony: the soil.

BASIC PRINCIPLES OF ORGANIC AGRICULTURE

Organic agriculture is usually identified as a technique that avoids the use of synthetic fertilizers and pesticides; however, its objectives go beyond this, since its goal is a holistic management of the agricultural production system. To date, there is no single definition of organic agriculture, and there may never be one, since there are so many different ways to implement this productive technique. These implementations are based on very diverse aspects, running from philosophical positions to considerations of specific ecosystems. Nevertheless, they all maintain a series of basic principles that characterize the activity, among these we find:

- **Protect the environment and promote health.** The productive process and organic product processing must not contaminate the environment. Organic agriculture eliminates the use of synthetic products that harm organisms beneficial to the soil, exhaust non-renewable resources, compromise air and water quality, and place the health of the growers and consumers at risk. Agro-industrial production under organic conditions must be carried out with products of organic origin, avoiding environmental contamination with process waste, as well.

- **Maintain long-term soil fertility by optimizing conditions for biological activity.** The health of the soil is an integral component for the security of the agroecosystem. In an organic production system, physical, chemical, and biological resources must be balanced to optimize the quantity and diversity of soil organisms and enhance its fertility. Soil quality improvement includes practices such as crop residue coverage, crop rotation, interspersed crops, green fertilizers, processed organic fertilizers based on plant and animal wastes, minimal cultivation methods in tune with morphological and climatic conditions, and the application of nutritional supplements allowed by organic standards.
- **Favor biodiversity in the production unit and its surroundings.** Biological diversity is also essential for agroecosystem stability and sustainability. It is promoted in all aspects of organic production by selecting appropriate crop varieties, combined with animal husbandry, rotation cycles, and biological control strategies for pest and disease management, among other permitted practices. Genetically managed and/or modified organisms, or their products, are not compatible with the organic philosophy; their use is prohibited in any aspect of production, processing, or industrialization of organic products, basically due to a possible threat against biodiversity.
- **Promote recycling of materials from the productive unit.** Organic agriculture promotes the intensive use of the productive unit, utilizing the larger quantities of biological products instead of synthetics. Soils exhausted by harvests must be re-supplied with nutrients from plant and animal waste coming from the same farm; furthermore, the use of non-renewable materials must be minimized. This will have, especially in tropical countries, a positive impact on the economic efficiency of the productive system over the long term.
- **Create optimum conditions for raising animals.** Organic animal husbandry prevents diseases and promotes the welfare of the animals by combining an organically produced balanced diet, adequate shelter, and management practices that reduce stress on the animals and their tendency to get sick.
- **Maintain the integrity of organically processed foods and products from initial production through the point of sale**. Primary and processed organic products, their ingredients and additives, must be produced and handled under standards that will not compromise consumer health; for example, in the case of processed products, organic processing norms will not allow radiation of the foodstuffs. In order to maintain product quality, there are also norms for the later stages of production or transformation, such as transportation, manipulation, and storage.

One of the characteristics, which differentiate organic from conventional production and other alternative production systems, is the existence of production standards and certification procedures. At the beginning of the organic production renaissance, marketing was carried out directly between the grower and the consumer; the guarantee that the product had been produced under an organic system was based, largely on the "trust" that the consumer confided in the grower.

FOUNDATIONS FOR SYSTEM CREDIBILITY

With increased activity, it became necessary to replace the "trust" with mechanisms that would warrantee the organic origin of the products. Thus, standards came into being together with the creation of monitoring institutions as the basis for the system's credibility. At first, the standards were drafted by growers' associations, which in turn created their own certifying agencies and controlling entities.

The process to standardize organic production took a qualitative leap in 1972, with the creation of the International Federation of Organic Agriculture Movements (IFOAM). IFOAM is a non-governmental organization representing more than 700 organizations involved with organic production in more than 100 countries. Its mission is to represent the worldwide organic agriculture movement at the international level.

One of the major contributions by this institution has been its input to the international development of regulations. In 1980, with the definition of the "Basic IFOAM Standards for Ecological Agriculture and Foodstuff Transformation", this institution established the "minimum rules" to be considered in formulating regulations in this area. These basic standards became a model that has served as a guide for the establishment of organic regulations at both the national level and for the certifying firms in many countries.

Starting with these, different sets of standards have been drafted, such as those for the European Union and the United States, to mention two; similarly, the FAO's Codex Alimentarius Commission has drafted the CODEX Standards for Organic Products, whose goal is to simplify international trade in this type of product.

Within the context described, organic production has become a new trend in agricultural production, since it responds to the challenge posed by sustainable development. The coming years will be, without a doubt witnesses to its consolidation. Nevertheless, much still remains to be done. A tremendous effort must still be made to encourage government interest and support, in order to foster integral development in this activity.