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AGRICULTURAL AND ECONOMIC ANALYSIS OF ORGANICALLY GROWN OR "ORGANIC" COFFEE

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INTRODUCTION

1. Document WP-Board No. 837/97, circulated by the Executive Director, contains a proposal to hold a round table meeting on organic coffee. In response to this proposal, the Executive Board requested the Executive Director to prepare a document containing information on the definition, market for, and economic viability of organic coffee (see paragraph 30 of Decisions Adopted number 232, document EB-3635/97).

2. It is hoped that the information contained in this document will be useful for newcomers to the subject while at the same time contributing towards informed reflection and debate on what constitutes coffee grown using organic farming methods, its specific market situation and its economic potential.

I. DEFINITION OF ORGANIC COFFEE

3. In order to characterize what constitutes organic coffee, we must first define what is meant by organic farming.

A – Definition of organic farming

4. Organic farming, as the process of using organic cultivation methods is usually known, has been the subject of considerable discussion as regards its definition and validity.

5. This is due to a number of factors. The first and most obvious is related to the various terms used in different languages for the concepts involved, which introduce new words and meanings into the existing vocabulary. Hence the difficulty of finding corresponding and accurate terms for the concepts of "organic", "ecological", "biological", "conventional", "traditional", and, more recently, the fashionable concepts of "sustainable" or "durable".

6. Rural economists, who are interested in observing farming systems from a micro-economic viewpoint, would prefer to use adjectives like "traditional" and "conventional" or to use terms like "small-scale", "family", "subsistence", "industrial" and "technified". They would refer to "production patterns" and distinguish between an economically self-sufficient structure and an economic structure in which the means of production tend to be mechanized, with division of labour and specialization designed to generate economies of scale. They would also use terms like "factors of production" in relation to land, labour and capital. In their vocabulary, the economics related to organic farming would be considered within the framework of measures **designed to maintain the fertility of the soil factor using appropriate techniques and to make intensive use of the labour factor, while using the capital factor in a less intensive form** than in more mechanized structures with a high input of fertilizers of inorganic origin.

7. The most important players in this controversial field, namely the farmers, will absorb the various terminologies, adopting and adapting methods, techniques and ideas derived from others through a process of trial and error. This leads us to consider the second factor responsible for the differences of opinion and ambiguities surrounding the definition of organic farming.

8. The second factor making it difficult to define what is meant by organic farming in terms of clear, specific and unchanging criteria derives from the fact that farming is a process that depends on a geo-ecological area; above all, it is a dynamic process and hence liable to evolution and change. The agricultural techniques used by farmers change as information and knowledge become more widespread as a result of the transfer of technology and its adaptation through the transmission of know-how, all of which takes place within an economic, social and political context. Adaptation to local geographical, ecological and climatic requirements, as well as the economic limitations of farmers, will determine the rate at which cultivation models are adopted.

9. Organic farming methods are not exempt from this generalization, as is evident to those who have explored the origins of this knowledge and the history of the spread of ideas.

10. English-speaking countries have adopted the term "organic" to reflect the trend for a *holistic*, albeit mechanical view of the world. The mechanistic perspective makes it possible to establish a cause-and-effect relationship between the different parts of a farming system; this permits the development of phytosanitary prescriptions and products.

11. French-speaking countries and countries following the French tradition have chosen to emphasize the "living" nature of observed agricultural phenomena using the term "biological agriculture" to describe the methods involved.

12. In fact, the definition of organic farming is complex and it is not enough to describe it as a "chemical-free" method since this is a restricted term which could lead to misunderstanding among those not familiar with chemistry, physics or farming. In order to better understand what constitutes organic farming we propose an analysis that includes three different levels of definition: the agricultural/technical, the economic, and the scientific/philosophical.

13. The **agricultural/technical** level describes the methods used for seed selection, germination, preparation and maintenance of the soil, planting, phytosanitary protection, fertilization, and, in the case of coffee, processing and warehousing. The emphasis is not on the production and use of new fertilizers, phytosanitary preparations and other additives, but on compliance with a set of principles, which are outlined below in considering the third level.

14. The **economic** level promotes production and marketing strategies adapted or diverging from the capitalist system, depending on the region concerned. For Western European or North American countries, with highly mechanized production systems and reduced use of labour, organic farming does not differ in structure from the productivist

system developed in the 1950s. The difference proposed by organic farmers and consumers of organically grown products is that an attempt is made to reduce the excess number of intermediaries so as to ensure a more direct, sociable and human relationship between producer and consumer.

15. In countries where the production structure is based on an abundant supply of family labour, in addition to facilitating direct sales to traders who guarantee a fair price to producers, encouragement is given to the preservation, as far as possible, of an independent and self-sufficient system. Self-sufficiency is achieved when farmers are able to produce their own seeds selected in terms of the local environment, their own fertilizers, their own phytosanitary aids and veterinary medicines for their animals, and are only minimally dependent on external suppliers of inputs. In extreme cases, we would be returning to family structures of mixed farming.

16. The **scientific and philosophical** basis for the practice of organic farming dates from the 1930s, partly as a consequence of the spread of knowledge in the natural sciences and partly as a reaction to the trend for organizing enterprises in the interests of greater mechanization and specialization. The third level mentioned comprises the following four principles:

- Soil is not an inert substratum but rather the habitat of a multiplicity of micro-organisms and organisms which act as agents for transforming nutrients and restoring them to plants in soluble and accessible form.
- Nutritional or environmental imbalance encourages parasites and lowers plant defences, making them more vulnerable to diseases.
- Fertilizers of mineral origin are by nature inorganic and should be avoided since they do not have the same effects as liquid manure or well-prepared compost.

- Farms should constitute an organic whole so as to be as self-sufficient as possible.

B – Organic farming methods applied to coffee growing and processing

17. Coffee (*Coffea*) is the major genus of the *Rubiaceoe* family which includes more than 6,000 species. Of the *Coffea* genus only two species are currently of economic importance: *Coffea arabica* (70 percent of world production) and *Coffea canephora* or Robusta (30 percent of world production). Both are tree crops which come into production three to four years after planting and have an economic life of between 20 and 30 years. Both species thrive only in the tropical and sub-tropical belt (temperatures between 18° and 26° C) but require different growing conditions. Coffee trees cannot withstand temperatures below freezing and require an average rainfall of well over 1,500 mm a year.

18. Modern plantations assist growth by making use of mineral fertilizers and irrigation. These operations substantially increase costs and are viable only in areas of high yield and output. They are therefore more vulnerable to the effects of low market prices than traditional plantations or farms where growers limit themselves to weeding, pruning and harvesting.

19. Thus, although most of the techniques used in organic farming can be applied to coffee growing, in adapting these techniques account must be taken of local ecological and climatic conditions on the one hand and the region's economic and social structure on the other, and, as a matter of course, of market conditions (price).

Fertilization and soil maintenance in coffee growing

20. Methods used in organic farming lay great emphasis on soil maintenance and fertilizer use, taking into account local fauna and flora and pedological knowledge (soil studies).

21. The scientific argument against the use of mineral fertilizers is based on the fact that these fertilizers are directly soluble and can create a nutritional imbalance in plants, since farmers use ready-prepared formulas which do not take into account specific local requirements.

22. In addition, these soluble mineral fertilizers become mineralized too rapidly so that nutrients not used by the plant go to waste, not only making the soil more acid but accumulating in the water tables and contaminating water courses. This serious problem poses a health hazard and has been reported mainly in Europe and North America.

23. Techniques involving the recycling of organic material (of vegetable or animal origin, e.g. liquid manure or blood) as compost are now being widely used, and not only on farms claiming to produce organic coffee. In addition to other vegetable fertilizers, coffee pulp can be recycled for use as compost. In the literature reviewed for the preparation of this document, no specific recommendations were found for the preparation of compost from coffee pulp. It is known, however, that this technique is being increasingly used in Latin America.

24. Another important technique for ensuring soil fertility is the use of **associated crops**. Careful selection of plants or trees to be planted in combination with coffee will determine the success achieved in restoring to the soil nitrogen and oligoelements essential for the proper nutrition of the coffee tree.

25. The above technique can be combined with other techniques used to maintain soil fertility, namely **intercropping techniques**. The plants used for this purpose can provide economic benefits as well as ensuring nitrogen fixation. This is the case of *Crotolaria ochroleuca*, a leguminous plant produced in Tanzania, which will be detailed below under the section on phytosanitary and weed control measures.

26. In Colombia, studies have been carried out on the interplanting of other varieties of leguminous plants to encourage nitrogen fixation and soil conservation, using only six types of leguminous plants or in combination with gramineous plants. In this study plants were also inoculated with strains of the *Rhizobium* bacteria. Further investigation is needed on symbiotic nitrogen fixation in coffee growing and research should be encouraged (successful studies have been carried out on the use of bacteria for nitrogen fixation in the case of other crops such as rice and maize).

27. Various methods are used to check soil erosion: rainwater drainage ditches, proper soil drainage systems, the planting of trees to act as wind breaks in areas exposed to excessive winds, etcetera. Techniques combining the planting of several varieties of shade trees between the coffee rows are also used. Dead leaves, branches and twigs can be used as fresh fertilizer as well as for spreading around coffee trees to control weeds.

Phytosanitary control measures in coffee growing

28. The first two principles mentioned above indicate the guidelines to be followed in applying phytosanitary measures: control of pests, diseases and weeds is based mainly on preventive measures. Hence, the following three methods are favoured for combatting diseases: i) natural control; ii) biological control, which includes bio-control through the use of biotechnologies and the selection of naturally resistant plants; and iii) the use of other naturally resistant plant varieties. Preventive measures are also used for controlling weeds and undergrowth. Such measures include a system of multi-annual crop rotation (whenever possible), mechanical or thermal weeding, and the use of vegetable cover.

29. Natural control consists in preserving the natural enemies of pests – in the case of coffee mainly pathogenic insects – in order to avoid the use of insecticides.

30. Biological control is based on knowledge of the life cycle of coffee's natural enemies, as well as of their ethology or behaviour and their reproductive cycles. Natural enemies can thus be introduced, which can be predators, competitors or pathogens of the pathogenic agent.

31. Bio-control is a slightly more sophisticated process than biological control and is likewise based on advances in knowledge in the biological sciences. One of the most popular examples is the use of genetically modified insect pathogens (such as strains of the *Thuringiensis* bacillus); another example is the use of the *Beauveria bassiana* fungus for the control of coffee berry borer.

32. Selection of varieties resistant to pathogens or insects is viable for the renewal of coffee plantations. However, this technique is less effective than for annual crops since coffee farms are planted to last for many years.

33. The use of other naturally resistant plant varieties is highly recommended in the farming techniques advocated for organic farming. This involves the use of insecticides found in nature. Substances such as pyrethroid or nicotine are natural insecticides. The Tanzanian *Crotolaria ochroleuca* mentioned previously has excellent nitrogen-fixation properties, is a natural pesticide, and checks the spread of undergrowth plants harmful to coffee trees.

34. Further research is needed to provide greater agronomic and biological knowledge and to ensure the wider dissemination of such knowledge so that farmers can gain access to low-cost methods of controlling diseases, pests, weeds and undergrowth.

Marketing strategies in the coffee market

35. The last principle mentioned above, which stipulates that farms should constitute an organic whole so as to be as self-sufficient as possible, has influenced both marketing strategies and forms of farm organization.

36. In the case of marketing, producers must prove to consumers that they have complied with the principles and methods described above. When consumers live in the same locality as producers – as can be the case for horticultural products, vegetables, fruit, dairy products or meat – less effort is required than in the case of products such as coffee where most consumers are scattered in distant places and have no idea of the complex process required to produce a cup of coffee.

37. In the case of organic coffee, not only the producers but also the processors, whether roasters or warehousers and packagers, must abide by the principles of organic farming. In this context we must consider the function of certification and the setting of standards to be complied with for a product produced as organic not to lose this qualification.

II. CERTIFICATION OF ORGANIC PRODUCTS INCLUDING ORGANIC COFFEE

38. Certification arose in response to the need to validate the efforts made by those involved and to provide a guarantee to consumers that the product they intend to consume was produced in accordance with well-defined and established quality standards. It also fulfils a function in disseminating information and educating the public by making the methods used and standards involved more widely known.

39. Certification does, however, entail additional costs for producers, who have to make considerable outlays to ensure that after a few years their farms will be approved as organic.

A – Agencies and institutions involved in certification of organic farming

IFOAM

40. The first international support body for the harmonization of standards of production, processing and marketing in organic farming is the International Federation of Organic Agricultural Movements (IFOAM). Created in 1972, this institution operates in a very dynamic way to promote, through a worldwide network, a wide variety of activities related to promotion, coordination of lobbying designed to influence parliamentary decisions, cooperation, education and popularization.

41. IFOAM publishes and periodically updates *Basic standards of organic agriculture and food processing*. The 1976 revision includes the guidelines for the production of tea, cocoa and coffee attached at Annex I. It should be noted that these guidelines are very indicative and that work is still at the stage of harmonizing the minimum criteria to be met.

European associations

42. The main bodies responsible for the certification of organic coffee in Europe are the Naturland Association, the *Institut für Marktökologie* and, in some cases, Demeter. The latter is responsible mainly for certifying "bio-dynamic" products whose principles follow the teachings of Rudolf Steiner, which became popular in Germany and Switzerland during the 1930s.

43. Naturland was created in 1982 by a group of scientific agriculturalists and consumers, and in 1989 began to offer certification services in Mexico. Naturland now issues certificates for more than 20 smallholder cooperatives, including more than 15,000 producers in Mexico (1989), Guatemala (1992), Peru (1993), Costa Rica (1996), Bolivia (1992) and Cameroon (1997).

Associations in the United States of America

44. The United States of America has 33 certifying associations for organic products. According to the information we have been given, the most important agencies for coffee are the Organic Crop Improvement Association International (OCIA), and the Organic Growers and Buyers Association (OGBA). The OCIA has around 40,000 producer members located in 35 countries. Around 40 percent of its members are in so-called developing countries.

National certifying agencies

45. In addition to these recognized European and North American bodies, a number of local institutions are beginning to appear, for example the Nicaraguan Centre for Research and Promotion in Ecological Agriculture (CENIPAE). These bodies provide certification at local and regional level, and in some cases depend on international institutions to guarantee producer reliability in the European and United States markets.

B – Procedures for obtaining certification of organic farming

46. Certification follows a series of strict procedures. The certifying body makes provisions covering each step involved in production, phytosanitary control, pest control, packaging, processing, warehousing, transport, marketing and labelling. It employs an independent committee to accept or refuse certification. Once certification has been obtained, annual visits are made for monitoring and control purposes in order to ensure strict compliance with the rules.

47. It should be noted that it is not only producers, but also traders and processors (roasters, packagers) who are required to apply for certification and to accept the system of inspection and monitoring; all these procedures covered by contracts between the certifying agency and the applicant. The right to use the trade mark of the certifying agency (e.g. "Naturland", "OCIA", etc.) is awarded through contracts in which applicants undertake to pay royalties or licence fees calculated annually on the percentage of sales of products marketed as organic.

C – Regulations related to certification of organic farming

48. Various countries have already adopted, or are in the process of adopting, bases for regulating certification – and hence production, processing and marketing (labelling) – of products produced using organic farming methods. The United States of America and the European Union are the most advanced in such measures.

European legislation

49. European legislation is designed to harmonize the initiatives of its various members. In response to "an increase in consumer demand for organically grown products" and noting that a new market for agricultural products has been created as a result; in order to ensure healthy competition among producers and market transparency in relation to the production, processing and transformation of products that are more costly to consumers; and, finally, in order to protect consumers in regard to compliance with rules and minimum standards for methods used in organic farming, the European Community has issued a series of regulations on this matter (EEC No. 2092/91). The latest revision was issued in July 1995.

50. These regulations cover the definition of minimum requirements for production methods and labelling of organic products (the terms used in some of the Community's other languages are: "ecológico" in Spanish; "ökologisch" in German; "biologique" in French; and "biológico" in Portuguese) and establish an inspection system for imported products.

Legislation in the United States of America

51. In order to protect both consumers and producers, processors and traders certified as organic, the United States Congress passed the Organic Foods Production Act (OFPA), published in 1990 and implemented in 1996, which establishes a comprehensive set of rules for a product to be labelled as "organically produced". It should be noted that it provides a complete list of both "chemically synthesized" and "natural" substances which are unacceptable in organic production. Nicotine is included among the latter.

III. SITUATION OF THE ORGANIC COFFEE MARKET

52. A detailed and in-depth analysis of the organic coffee market and its potential for creating new markets requires a knowledge of the producing and consuming countries involved, distribution outlets, the volume of transactions over the last few years, and the prices paid on the market.

53. Since relevant statistics are almost non-existent or scanty, our comments will be based on information and opinions provided by coffee trade experts and certifying agencies. Further research is needed to complete this analysis.

Producing and consuming countries

54. The main countries producing organically grown coffee are in Latin America: Costa Rica, Peru, Mexico, Guatemala, Nicaragua, El Salvador, Brazil and Colombia. In addition, information recently provided mentions Papua New Guinea, Indonesia (Sumatra and a USDA project in Timor), India, Uganda, Cameroon and Tanzania.

55. The main organic coffee consuming countries are the United States of America, Germany, Netherlands, Switzerland, France, Austria and Japan. While exact percentages of organic coffee consumption in each country are not known, it is suggested that the major buyers are the United States of America and Germany.

Marketing of organic coffee

56. The organic coffee market is said to be accounted for by health conscious consumers (the so-called "health food" market). Advertising to promote this type of product has shifted from a market in which consumers were mainly concerned with health issues to one aimed at consumers concerned with environmental and social issues. This phenomenon can be observed mainly in Europe with the linking of the image of "fair trade" with the image of sustainable and organic agriculture.

57. As in the case of other products sold under the organic label, organic coffee is sold to consumers with the guarantee that the product comes from a direct and reliable source and has not passed through various traders and distributors; this means that a large proportion of the premium which consumers are prepared to pay will be received directly by producers and will go towards: i) helping the environment; and ii) contributing to greater social and economic equality through "fair trade".

58. A Directory of Specialty Coffee Suppliers in the United States of America, published in November 1994, shows that only 25 of the 400 firms listed supply organic coffee. This figure is consistent with the affirmation that while thousands of producers may be certified by the OCIA, only a dozen or so firms, mainly roasters and a few coffee merchants, are being certified by this body. These firms play a determining role in promoting consumption of coffee certified as organic and the system relies on consumer confidence in these firms, which adopt a strategy of dealing directly with known cooperatives and small producers in order to avoid problems with increasingly strict regulations.

59. In order to cope with the administrative requirements for monitoring by the certifying agencies and to increase their bargaining power, these small producers tend to join cooperatives.

Organic coffee as part of a segmented market

60. The sales potential for organic coffee represents only a small fraction of the market and is regarded as a market niche. Some analysts consider that it belongs in the gourmet market but for others organic coffee cannot be associated with speciality coffee, since it also comes in a variety of qualities.

61. It is said in the speciality coffee market that organic coffee has considerable economic potential. The inclusion of this coffee among speciality coffees is not attributable to the fact that the use of organic farming methods will inevitably produce an improvement in flavour,

but because, being of the Arabica variety, it can be used by coffee firms to produce blends which can be sold to consumers as gourmet coffee provided that, in addition to being certified, it can satisfy consumer taste for a higher quality coffee.

62. According to Mr. Ted Lingle, Director of the Specialty Coffee Association of America (Reuters, 8 July 1997), it is estimated that by 1999, 5 percent of the coffee sold in the speciality coffee market will be organically grown. This corresponds to around 80,000 to 100,000 bags of coffee for the American market.

The real volume

63. According to a study published in 1993, consumption in the main consuming countries of the European Community of coffee certified as organic and complying with European Community Regulation No. 2072/91, accounted for only 0.12 percent of the total in 1991 and corresponded to a volume of 2,240 tons or 24,000 bags.

64. In 1996, members of Naturland sold a total of 1,800 tons in Germany, Netherlands, Austria and Switzerland. According to the statistical data of the ICO, consumption in these countries was around 1.14 million tons. This implies that sales by members of Naturland accounted for around 0.16 percent of the coffee consumed in these four countries.

Potential volume of organic coffee sales

65. There are no exact figures of the volumes sold through other distributors (Demeter and other certifying agencies) and consequently this document cannot specify the real or estimated volume of organic coffee sales. According to the September 1995 issue of *Tea & Coffee Trade Journal*, the Wet Coffee Processor's Association (WCPA) of Uganda plans to sell around 5,000 tons of Arabica coffee to the European market.

66. Another source indicates that 7,000 farmers in Timor produced 450 tons of coffee in 1996. It was estimated that the USDA project covered 8,500 farmers exporting 600 to 800 tons to the U.S. market in 1997.

67. It should be noted that in some areas where coffee has been grown without the aid of synthetically produced fertilizers or pesticides marketed by the major companies, which is the case of the Keffa province in Ethiopia due to specific geo-ecological factors (its remote location at an altitude of 1,700 to 2,000 metres and the dense forest cover) as well as to various historical factors, it is envisaged that if demand and the prices received provide a sufficient incentive, producers would be in a competitive position to proceed to obtain certification and to market their coffee as organic.

68. As an indication, it has been estimated that applying the strictest standards for the certification of organic products, this Ethiopian province alone could have certified a volume of 9,700 tons in 1995 (under the appellations of Djimma and Limu); moreover, during the last five years, it exported 73 percent of "sun-dried" quality coffee, corresponding to 35,000 tons, and around 3,000 tons of Limu, representing 20 percent of its total exports of washed coffee.

69. These data provide much food for thought on the future of organically produced coffee. What will happen in the market? Will countries which have complied with the strict standards required by the European and United States markets find themselves threatened by competitively advantaged countries like Ethiopia? Perhaps not, since traditional distributors whose reliability has been established as a result of the hard work of the more prestigious certifying agencies will provide protection, at least for a while, for countries which have met all the requirements, especially those in Latin America. Consensus on what constitutes an organically grown product and the standards to be applied, the role of the certifying agencies and the guarantee to consumers will remain the basis for predicting the way this market will develop.

Comparison between prices paid for organic and non-organic coffee

70. In 1992 organic coffee was sold at a wholesale price of US$1.00 to US$1.50 above that for non-organic coffee and commanded a premium of US$1.50 to US$2.00 in retail sales.

As a rule, it is assumed that consumers in countries like Germany are prepared to pay a premium of 15 to 20 percent for products certified as organic. This margin may vary according to the economic situation (becoming narrower in periods of recession) and also as a result of awareness and promotion campaigns.

71. The price differential received by producers will depend in large measure on their bargaining power with distributors. Since most organic coffee producers are small farmers who have little experience and limited power in negotiating more remunerative prices, it is the distributors who benefit most, comparatively and relatively.

The importance of organic coffee

72. The relative importance of coffee grown using organic farming methods is indicated not so much by the volume of coffee sold as by the enormous efforts made by producers to acquire knowledge of farming techniques requiring low levels of investment while at the same time responding to the main aims of sustainable development, namely: i) to use less harmful alternatives for maintaining the fertility and quality of natural resources; and ii) to help small and medium farmers whose structures are based on intensive use of labour to organize themselves in cooperative systems which will give them access to the market. Under these circumstances much of the coffee being produced in the world is "organic" by default. Precise figures of the total number of farmers involved in using these techniques or the area allotted to this type of production are not available, but according to the information obtained they number only a few thousand.

73. The extent to which methods advocated for organic farming become more widespread will largely be determined by the following factors: i) the capacity of these methods to adapt themselves and accept the incorporation into their principles of new biotechnologies and bio-control; ii) the role of agricultural extension campaigns promoted by Governments; iii) the flexibility shown by certifying agencies and government agencies in preventing themselves from becoming a burden and an obstacle to change while at the same time

ensuring strict compliance with contracts for certification and monitoring in order to maintain consumer confidence; iv) education and awareness campaigns to promote organic products among consumers; and v) the relative price of organic coffee, which would need to compensate for production costs and the additional costs of certification and monitoring throughout the production, processing and marketing chain.

SUMMARY AND CONCLUSIONS

74. There is still no consensus on the definition of organic coffee due to the intrinsic difficulty of defining what constitutes organic farming. Bearing in mind the historical evolution of this concept, this document proposes an analysis covering a technical/agronomic level, an economic level, and a social/philosophical basis in order to define the application of the organic concept to the production, processing and marketing of coffee.

75. Certification standards are not precise. Although the certifying agencies have published very detailed standards for the methods to be used in organic farming, specific standards for the production and processing of so-called organic coffee have still only been determined in very general terms (see Annex I). We have been informed that work is still in progress on standards for coffee.

76. Countries wishing to export their products to regions where regulations have been strictly implemented in recent years are faced with the need to comply with a set of standards which may constitute non-commercial barriers to free trade.

77. It is still difficult to assess the economic potential of organic coffee. The additional costs involved to carry out the necessary inspection and control of organic farming methods, plus the costs of acquiring proprietary rights to trade marks, would require the various agents involved, i.e. producers, processors and traders, as well as certifying agencies and Governments, to reach agreement on the regulations to be followed and the administrative costs entailed both for producers and consumers.

IFOAM

INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURE MOVEMENTS

BASIC STANDARDS FOR ORGANIC AGRICULTURE AND PROCESSING AND GUIDELINES FOR COFFEE, COCOA AND TEA; EVALUATION OF INPUTS

Decided by the IFOAM General Assembly
at Copenhagen/Denmark, August 1996

IFOAM Guidelines on Coffee, Cocoa and Tea

Background

The aim of organic coffee, cocoa and tea cultivation includes components in the field of:

- organic agriculture techniques,
- protection of the environment, and
- socio-economic aspects such as:

Organic coffee, cocoa and tea should be produced within a sustainable farming system. Soil fertility should be maintained and improved by using natural, and – as much as possible – local resources as well as organic by-products.

Drawbacks of coffee, cocoa and tea production and processing such as erosion and pollution are reduced to a minimum through the implementation of appropriate conservation principles. The use of fossil fuels and other non-renewable sources must be minimized.

It should aim at supplying residue free products.

Together with the development of organic agriculture within each production system, socio-economic aspects should be improved.

Claims like "no fertilizers, no pesticides used" or "residue free" are not enough to qualify production of coffee, cocoa or tea as organically grown.

A crop may qualify as organic, when all possible or required techniques are used, like:

- clearance in a selective way that does not affect the environment and the local population,
- terracing, contour planting, soil covers and mulching to prevent erosion,
- increase of organic matter by using legumes or shade trees loppings,
- soil activation by correcting the pH,
- use of clones or seedlings resistant to pest and diseases,
- regulation of the micro-climate and improvement of the ecological diversity to control pest and diseases,
- return of nutrients removed by using mineral balance calculation,
- shade planting integrated in the organic farm management.

Guidelines for production

1. Clones or seedlings must be adapted to the local climate. They should be as tolerant or resistant as possible to endemic pests and diseases as well as drought resistant.
2. Continuity of production is guaranteed by rejuvenating and/or replanting programmes.
3. Erosion is prevented by proper soil conservation methods such as,
   - planting on terraces or contours,
   - by growing soil covers in empty spaces,
   - by abolishing clean weeding and forking,
   - and by making silttraps in drains.
4. All kinds of methods should be used to improve soil organic matter and soil micro-organisms by growing legumes, by applying organic matters like compost, shade tree loppings, etc.
5. Soil activity may be optimized by correcting the pH.
6. Removed nutrients should be replaced in order to maintain mineral balance.
7. To maintain or to increase the long-term fertility of the soil, several activities should be undertaken. All available organic material should be recycled.
8. The nutrient supply is assured mainly by the regular lopping of in situ (leguminous) low and medium shade trees as well as by compost and manure produced on the farm or estate itself. A deficiency in nutrient supply has to be solved by permitted inputs of local sources.
9. The demand for firewood must not lead to deforestation. Sufficient firewood (or other energy sources like bio-gas) must be available from sustainable sources.
10. Processing is only allowed with mechanical and physical processes, with natural fermentation only.
11. Any by-product like coffee and cocoa pulp and tea stalks, is recycled to the fields after composting.
12. As much as possible, processing and packing should be done in the country of origin.
13. The legal regulations regarding the living standards and working conditions for workers and smallholders must be assured. This means appropriate housing, food, education, transport and health facilities, relative to the general conditions of life in the region of production.
14. Suitable areas for (organic) home gardens and/or animal husbandry must be available to workers.

Inspection and certification

The following requirements must be fulfilled:

1. The entire farm unit should be organic.
2. At least once a year an inspection is made during the growing season. The visit may be unannounced to the producer. Producers are visited at random, determined by the inspector as agreed with the certification body. Inspection is done by field visits, by checking the organic growing techniques and by a check of the bookkeeping.
3. As far as co-operatives of farmers' groups are concerned, an internal control system has to be established which is also checked at random.
4. The conversion towards organic cultivation is planned by making a conversion plan (or project) which is presented to the certification body when applying for certification, or to the inspector upon the first visit. Qualification as organic depends on the fulfilment of this conversion plan.
5. A contract has to be made between producer or producer organization and the certification body.
6. A farm documentation with general data, a map of the farm and a list of registered fields must be made available.
7. Bookkeeping has to include farm inputs, yields, flow of products in processing, storing, packaging and sales.
8. Samples may be taken for residue analysis.
9. A detailed list of farm inputs has to be made available for approval by the certification body.
10. At the beginning of the conversion, social parameters like housing, food and hygienic conditions are inventoried and a plan for improvements is presented. These are implemented according to the time frame agreed upon.