**DEVELOPMENT OF ORGANIC FARMING TO**

**ENDORSE SUSTAINABLE AGRICULTURE IN INDONESIA**

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**Abstract**

*The movement of organic agriculture in Indonesia began in 1984 through the establishment of the Bina Sarana Bakti Foundation (BSB) followed by The Program of Go Organic 2010.* *The Indonesian organic agriculture development program from the Ministry of Agriculture is to encourage the realization of robust, competitive, sustainable and environmentally sound agriculture, and encourage an increase in the contribution of the agricultural sector to the national economy, through increasing Gross Domestic Product, exports, job creation, poverty reduction and increase public welfare; and fight for the interests and protection of Indonesian farmers and agriculture in the international trade system.* *The mission to be achieved is in line with the mission of organic agriculture as emphasized by the International Federation of Organic Agriculture Movement (IFOAM) and the World Food and Agriculture Organization (FAO). In the development of agriculture in Indonesia in several regions there are several problems faced regarding organic farming, Organic farming is a production system that supports the health of soil, ecosystems and humans. This depends on ecological processes, biodiversity and cycles that are adapted to local conditions, rather than the use of inputs with adverse effects. Organic farming combines tradition, innovation and science to benefit the shared environment and promote fair relationships and good quality of life for all involved. The use of agricultural methods can maintain or even increase soil fertility, while producing healthy and diverse food locally for humans. If we look at this role, it is certainly necessary to develop agricultural strategies in order to support sustainable agriculture in Indonesia..* *The strategy for developing organic farming needs to involve many parties to provide solutions to the problems faced so that it is expected that the development of organic agriculture can support sustainable agriculture in Indonesia.*

*Key Words ; Organic Agriculture, Development Strategy, Sustainable Agriculture*

**Introduction**

The organic farming movement in Indonesia started in 1984 through the establishment of Bina Sarana Bakti (BSB) Foundation as the center for organic agriculture development by Rev. Agatho Elsener in Bogor (Zahroh, S 2010 ). In 2006, there were 23,605 organic farmers in Indonesia with an area of ​​41,431 ha, 009 percent of total agricultural land in Indonesia (IFOAM in Mayrowani,2012 ). In 2007 the area of ​​organic farming in Indonesia was 40,970 ha.

Organic agriculture is currently developing widely, both in terms of cultivation, production facilities, types of products, marketing, knowledge of consumers and community organizations or institutions that are interested in organic farming. In 2011 the certified organic farming area was 90,135. 30 hectares. The area without certification covers 134,71766 hectares, the area in the certification process is 3,80 hectares. Organic farming area with PAMOR certification covering an area of ​​5.89 hectares. PAMOR is the Indonesian Organic Quality Assurance, a participatory guarantee developed by the Indonesian Organic Alliance.

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 fairrelationships and a good quality of life for all involved.. Organic agriculture is not only limited to eliminating the use of synthetic inputs, but also utilizing natural resources sustainably, producing healthy foods and saving energy.

According to the IFOAM (International Federation of Organic Agriculture Movement) there are 4 basic principles of organic farming, namely:

1. Principles of Health: Organic Agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisibl

2. Ecological Principles: Organic Agriculture should be based on living ecological systems and cycles,work with them, emulate them andhelp sustain them.

3. Principle of Fairness : Organic Agriculture should build onrelationships that ensure fairness withregard to the common environment and life opportunities..

4. Principle of Care: Organic agriculture must be managed carefully and responsibly to protect the health and well-being of present and future generations and the environment.

The government’s support for organic farming emerged in 2001 when the Ministry of Agriculture launched “Go Organic 2010”. The program targeted Indonesia to become one of the biggest exporters of organic commodities in the world (www.pphp.deptan.go.id). Despite the availability of the government’s master plan for the program (Sulaeman 2006 in Nugraheni, S, 2013), several researchers considered the program has been failed due to the lack of government supports (ADB 2006; Jahroh 2010). At the moment, organic agriculture movements are mostly leaded by NGOs, educational institutions and self-organizing farmer groups.

The Indonesian organic agriculture development program from the Ministry of Agriculture is to encourage the realization of resilient, competitive, sustainable and environmentally sound agriculture, and encourage an increase in the contribution of the agricultural sector to the national economy, through increasing Gross Domestic Product, exports, employment creation, poverty reduction, and improving community welfare; and fight for the interests and protection of Indonesian farmers and agriculture in the International trade system. The mission to be achieved is in line with the mission of organic agriculture as emphasized by the International Federation of Organic Agriculture Movement (IFOAM) and the World Food and Agriculture Organization (FAO).

Indonesian Organic Community (MAPORINA), a group consisting mostly of Ministry of Agriculture officers and those from the academic, was established in 2000. As of 2007, it has 14 branches, and focuses on research, consultation and development of organic farm models. In 2001, through active lobbying by MAPORINA, the “Go Organic 2010” program was initiated by the Ministry of Agriculture. However, it was not successful due to the lack of support from the Minister of Agriculture



According to the Codex Alimentarius Guidelines, if a product is called organic, it means that the products have been produced according to the standards of organic production and are certified by the certification body or those who have the authority to do so. While what is called organic farming is agricultural activities that seek the use of minimal external intake and avoid the use of synthetic pesticides and fertilizers. The methods of farming in organic farming can be used to minimize air pollution, soil pollution and water pollution.

In Indonesia, the so-called organic agricultural products are stipulated by the Indonesian National Standard (SNI) for Organic Agriculture no SNI 6729-2013. Organic agriculture is a holistic production management system to improve and develop agroecosystem health including biodiversity, biological cycles and soil biological activities. This paper aims to explain strategies of organic farming which expected can support sustainable organic agriculture in Indonesia.

 **Problem in Development of OrganicFarming**

In the development of agriculture in Indonesia according to the Inter Regional Cooperation Institute (Lekad) in several regions there are several problems faced relating to organic farming, including:

a. Cultivation

(1) The area of ​​land that implements an organic farming system is relatively small and is located around an organic (conventional) cultivated land and generally relatively small compared to the land used for an organic (conventional) agricultural cultivation. This is related to small farmers' land ownership so that when the farmer changing the cultivation system into organic farming, the area of ​​land cultivated or cultivated only as large as the land it has. Likewise with the land cultivated by organic farmer groups, the area is still small because not all members in the farmer group change their agricultural cultivation from conventional to organic.The small amount of land cultivated, also collided with the location of land located around the location or in the middle of the location of conventional agricultural cultivation.

(2) The existing water source has been contaminated with fertilizers, pesticides and other chemicals.

Water resources are very instrumental in supporting the success of agricultural businesses, including organic farming. Organic farming has a specificity that is required by minimum contamination from synthetic chemicals originating from the surrounding environment. With regard to water resources, currently the condition of water sources in agricultural centers has been contaminated with synthetic chemicals such as fertilizers and chemical pesticides. This condition is a problem for organic farmers, because to get free or minimal water pollutants must be done by:

a) look for alternative water sources such as wells;

b) make water channels from the upstream part of the river;

c) treat water first by depositing or treating it so that the water is not polluted.

Efforts to obtain water in accordance with the requirements of organic farming require costs, thus causing the costs of organic agricultural production to increase.

(3) The area of ​​cultivation land is far from transportation access.

One of the locations suitable for organic farming is in areas where there is still minimal pollution of the environment. Locations like this are usually far from transportation access. Even though transportation is one of the means to distribute agricultural facilities and bring organic agricultural produce. The lack of access to transportation in locations that meet the requirements for organic farming (due to minimal environmental pollution) raises several further implications, including:

(a). difficulty in distributing input or agricultural production facilities such as organic fertilizers and pesticides, seeds and work equipment;

 (b). the difficulty of bringing organic agricultural produce / products from land to market;

(c). the high cost of transportation to and from the location of organic farming.

(4) Organic seeds are not yet available.

The lack of organic seeds is caused by institutions producing seeds (farmer groups or seed companies) that have not produced organic seeds. Therefore, the seeds used by organic farmers, at present in general are still conventional seeds.

(5) Not all varieties are adaptive to organic farming.

The pattern of organic farming cultivation prioritizes the adaptive power of plants / varieties to the environmental conditions in which they grow. Some varieties are not sufficiently adaptive to cultivation patterns and environmental conditions created by this system. This is because these varieties have been conditioned to be adaptive to chemical fertilizers, chemical pesticides and other conventional cultivation treatment.

b. Production Facilities.

Problems related to organic agricultural production facilities include :

(1) Compost / organic fertilizer is not yet available.

Organic fertilizers are used in organic farming to enrich nutrients in the soil and nourish plants. Organic fertilizers can be either solid fertilizer (compost) or liquid fertilizer used for leaves or fruit. The wide distribution of organic farming has not been supported by the production and distribution of organic fertilizers.

(2) There are not yet many organic pesticides for plant pests / diseases. As with organic fertilizers, the provision of organic pesticides also experiences obstacles in terms of production, types of pests and diseases that can be controlled, and their distribution to organic communities / farmers.

(3) It requires expensive investment at the beginning of development because it must choose land that is free of synthetic agrochemicals.

(4) Prices of organic production facilities are relatively more expensive and the level of availability in the market is limited.

(5) The technology of providing organic production facilities is not easily available at the field / farmer level.

c. Processing

Problems related to processing organic food include :

(1) Equipment is still used together to process organic and non-organic food. This is because farmers / breeders do not have the ability to provide equipment specifically used for processing organic food.

(2) Not many processed organic food products. At this time, more organic fresh food is found in the market. There is still little organic food that has been processed, so consumers still have limitations to consume / choose organic processed food products.

(3) Not much information about processing organic food. Information about processing organic food has not been widely produced and socialized.

(4) The lack of availability of auxiliary materials (sweeteners, dyes, preservatives) in processing organic food. Organic food processing requires food additives in the form of sweeteners, dyes or preservatives. In the case of organic food, these materials are categorized as may be used for processing organic food. At present the availability of food additives in the market is still very limited.

(5) Limitations of packaging materials that meet the requirements for organic food. Processed food needs to be packaged in packages that can maintain food quality. Packages that fall into the category of organic packaging are still slightly available in the market.

d. Marketing

Problems related to marketing organic food include :

(1) The lack of technical knowledge and marketing channels controlled by organic entrepreneurs.

(2) Organic food marketing channels are still few and adhere to conventional marketing, so they are at risk of being mixed with non-organic food.

(3) The high cost of transportation of organic food. Remote locations and lack of means of transportation have caused transportation / distribution costs of organic food from land to market to be high.

(4) The lack of special places and conditions to sell organic food.

(5) Producers or marketers of organic food have not all used places specifically for marketing organic food. There is still organic food that is marketed together with organic food.

(6) The place for marketing organic products is still small. The marketing of organic food is still concentrated in certain regions, not yet spread evenly in every consumer region.

(7) The high cost of listing fees for each product that will be marketed at the supermarket.

(8) Organic food producers are generally farmers or farmer groups that are not too financially strong. Marketing using a supermarket network can increase sales volume, but is constrained by a high listing fee and a long-term payment system behind.

(9) Packaging is less attractive. Organic food that is marketed has not been packaged well and attractively, so it still creates an unattractive impression.

(10) Local / domestic products compete with imported products. Organic food import products are being widely traded in Indonesia. More imported products are processed organic food products and traded in international networked supermarkets.

(11) The marketed product does not yet have an organic certificate

(12) There is no adequate price incentive for producers of organic agricultural products

(13) There is no market certainty, so farmers are reluctant to produce these commodities.

e. Human Resources

Problems related to human resources for the development of organic agriculture include: The lack of a number of human resources who have competencies in the field of organic agriculture, both supervisors, researchers and inspectors of organic agriculture and business people / farmers.

f. Marketing

Problems related to marketing organic food include :

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**Concept of Sustainability Agriculture .**

Sustainability agriculture is the management of successful resources for agricultural enterprises to help change human needs while maintaining or improving environmental quality and conserving natural resources. Agricultural systems can be said to be sustainable if they cover the following:

a. Ecologically stable, which means that the quality of natural resources is maintained and the ability of the whole agroecosystem - from humans, plants, animals to soil organisms - is enhanced. Local resources are used in such a way that the loss of nutrients, biomass and energy can be reduced as low as possible and can prevent pollution.

b. Can continue economically, which means that farmers can produce enough to meet their own needs and / or income, and earn sufficient income to return labor and costs incurred.

c. Fair, which means that resources and power are distributed in such a way that the basic needs of all community members are met and their rights in land use, adequate capital, technical assistance and guaranteed marketing opportunities.

d.Human, which means that all life forms (plants, animals and humans) are valued.

e. Flexibility, which means that rural communities are able to adapt to changes in farming conditions that continue.

Sustainable agriculture can have different meanings for different people, but all of them have attention to prevent the degradation of some aspects of agricultural land. Some farmers primarily pay attention to the degradation of natural resources (eg land becomes less productive). Others may pay more attention to the decline in profits caused by rising labor costs or means of production, poor planning, or solely because of changing economic conditions. The causes and solutions to these problems will be different for each situation. Sustainable agriculture is a philosophy; this is an agricultural system.

This empowers farmers to work in line with natural processes to protect resources such as land and water, while minimizing the impact of waste on the environment. At the same time, the agricultural system becomes more resilient, self-regulating and its benefits can be maintained. There are many different ideas about how to be sustainable. Different people promote different concepts with enthusiasm, and in many cases, this concept contains many valuable things. Many have similar approaches, and often are variations of the same theme. Each approach will have its own application, because an approach that works well in one person does not mean that it will succeed in others. Some types of agricultural systems that can be considered as sustainable agriculture are: (a) Low-input farming systems, (b) Regenerative farming systems, (c) Biodynamic systems, (d) Organic farming systems, (e) Conservation farming systems, and (d ) Hydroponics. In general, adopting the basic principles of sustainable development, sustainable farming systems must fulfill three basic principles as described below. e) Systems for conservation farming, and (d) Hydroponics. In general, adopting the basic principles of sustainable development, sustainable farming systems must fulfill three basic principles as described below.

1. Economic Sustainability. For an activity to continue, a farm must be economically profitable. Sustainable agriculture can increase economic feasibility in many ways. In short, improving land management and crop rotation will increase yields, both in the short and long term, because it improves soil quality and water availability, as well as creating environmental benefits. Economic viability can also be achieved by reducing the use of machine tools, reducing the cost of chemical fertilizers and pesticides (where most farmers cannot buy them), depending on the characteristics of the production system.

2. Environmental Sustainability. Sustainable agriculture is often described as ecologically feasible activities that have little or no negative impact on natural ecosystems, or even improve the quality of the environment and natural resources on which agricultural activities depend. Usually this is achieved by protecting, recycling, replacing and / or maintaining natural resource bases such as land, water, biodiversity and wildlife that contribute to the protection of natural capital. Synthetic fertilizers can be used to supplement natural inputs if needed. In sustainable agriculture, the use of chemicals known to be harmful to soil organisms, soil structure and biodiversity is avoided or reduced to a minimum.

 3. Sustainability Social. Social sustainability is related to the quality of life of those who work and live on agriculture, as well as the surrounding communities. This includes equal revenue or income for different stakeholders in the agricultural production chain. In the context of high unemployment, sustainable agriculture promotes the sharing of value added agriculture for more members of the community through more use of available labor, and will increase cohesion and social justice. Proper treatment of workers and choosing to buy materials locally rather than buying from far away is also an element of social sustainability.

*Why Sustainable Agriculture?* If we cannot sustain agricultural production, we will eventually see a decline in food production. It is well known that humans need agricultural products: for food, for clothing, etc. Science may be able to provide substitutes (such as synthetic fibers) but raw materials to make this substitute product are limited. As the population increases, the demand for agricultural products also increases..

The average growth in rice production in Asia declined sharply in the 1980s, with an average growth of 2.6% in the 1970s to 1.5% in the period beginning in 1981, partly due to an increase in the price of chemical fertilizers and pesitisida / herbicide. And more importantly, even though there has been an increase in production as a result of the green revolution, poverty and hunger still occur, land degradation and environmental damage occur widely and cannot be handled. FAO estimates say that even before the recent food crisis, 848 million people worldwide suffered severe hunger between 2003 and 2005.98% of them were residents of developing countries. To reduce hunger needed to increase food production, which in turn requires access farmers towards agricultural inputs to increase productivity, increase knowledge and skills. Agricultural intensification that uses excessive pesticides and chemical fertilizers has caused water pollution and reduced soil fertility, which ultimately reduces biological diversity because it kills plants, insects and wild life that are beneficial. Irrigation has caused salination (increased salinity in the soil) and lowered groundwater levels in areas where more water pumped out for irrigation than the ability of rainwater to fill it..

Sustainable agriculture has emerged as an alternative agricultural system to answer the many obstacles faced by farmers who are poor in resources and time, and guarantee environmental sustainability. This refers to the capacity of agriculture to contribute to overall well-being by providing food and other goods and services that are efficient and economically profitable, socially responsible, and environmentally feasible. This system involves an interrelated combination of land, crop and livestock production which corresponds to the use or lack of use of external inputs that have the potential to endanger the environment and / or health of farmers and consumers. Instead, the system emphasizes food production techniques that integrate and match local natural processes such as nutrient cycles, biological nitrogen binding, soil regeneration and natural enemies of pests. Using local resources in improving land and can be useful where increased income can reduce barriers to adopting sustainable resource use practices

**Implementation of Sustainable Agriculture Development in Indonesia**

National development, since the beginning of the old order and especially since the new order and until now in the reform era, development in Indonesia has always focused on economic development, as an effort to accelerate economic growth and the welfare of the community. With a conventional approach, the logical consequence that occurs is that the success of economic development has had a negative impact on the environment. Awareness of the environmental impact of the development already exists. Concern for the environmental impact is expressed in the existence of obligations for environmental impact analysis (Amdal) on various permits for the implementation of construction projects, including physical development in the agricultural sector. Even though the implementation is often still a probl nvironment arises due to the development of various projects that are less compatible with the carrying capacity of nature. Indonesia's concern for environmental issues is also reflected in Indonesia's commitment to participate in implementing several international meetings and agendas related to environmental conservation such as Agenda 21, Rio de Janeiro and Earth High Level 10 Johannesburg .

However, various damage to the natural resource environment is a reflection of the inconsistency of the government and the Indonesian people towards Agenda 21 commitments on SARD (Rio de Janeiro Journey, 1992) and agreements in the meeting of the 10 Earth Summit in Johannesburg, 2002 and National Sustainable Development Conference-KNPB, 2004. There are three sub-items about sustainable agriculture, the results of National Narcotics Board which have not been implemented optimally in relation to environmental damage, namely: a) increasing the opinions and welfare of agricultural actors; b) providing access to agricultural resources for the community with management and ownership systems; c) increasing land productivity and environmental media as well as rehabilitating damaged lands to increase food production in the framework of food security while remaining in favor of farmers. Initially, it was able to increase agricultural productivity and production, especially food, but then the efficiency of the product decreased because of the influence of feedback from the various side effects that had been lost.

Conventional agricultural practices have continually increased the use of chemicals that are not environmentally friendly and directly affect land degradation and the environment and reduce the quality of agricultural production. In this connection, Untung (2006) identified the impact of conventional agricultural development practices that have been so far, namely: (a) increased erosion of surface, floods and landslides; (b) decrease in soil fertility; (c) loss of soil organic matter; (d) salining groundwater and irrigation and sedimentation of soil; (e) increased water and soil pollution due to chemical fertilizers, pesticides, domestic waste; (f) eutrification of water bodies; (g) pesticide residues and other hazardous materials in the environment and foods that threaten people's health and market rejection; (h) destruction of agricultural biodiversity, loss of traditional wisdom and culture of local plants; (i) contribution to the process of global warming; (j) increase in unemployment; (k) decreasing employment conditions, increasing social inequality and the number of smallholders in rural areas; (l) increasing poverty and malnutrition in rural areas; (m) the dependence of farmers on the government and companies / agrochemical industries In line with those described above, Sihotang, (2010) specifically emphasizes the pollution and damage aspects in the agricultural environment because of the disproportionate use of agrochemicals (fertilizers and pesticides). .

Problems faced in the future relation of agricultural development are complex problems, such as striving to achieve Millennium Development Goals (MDG's) that cover poverty, unemployment and food insecurity, creating a price policy (pricing national plasmutah protection and utilization; (1) improvement of agricultural and agricultural human resources, including sustainable agricultural knowledge and skills; (2) strengthening farmers' access to markets and low interest capital; (3) improvement and development of agricultural structure information (irrigation, reservoirs, roads, and farming roads); (4) increasing food diversification.

As stated above, sustainable development is not only based on natural environmental aspects, but also on economic and social development, which are mutually related. In this regard, the implementation of continued agricultural development is not only the task of the Agriculture Ministry or the Ministry of Environment but also related to the broad institution. Unfortunately, in coordination and cooperation between agencies and between sectors, it is a weak point in the implementation of our development so far, so there must be a strong political commitment so that both economic and social development can integrate the environmental aspects in full.

 One of the causes of failure to implement sustainable development is the implementation approach sector and partial. Such an egosectoral approach results in many of Indonesia's commitments at many international conventions and agreements not being fully implemented in the field. Such aosectoral approach also causes the current era of global competition, Indonesia is always lagging behind and has not shown a high commitment to various global agreements.

The Development of Sustainable Agriculture requires the implementation of an integrated, cross-sectoral and cross-disciplinary manner, both at the central and / or regional level. Regional autonomy in the regencies / municipalities or at the provincial level, with all its powers also seems to be very effective in supporting sustainable development of concept-based agriculture, programs and strategies to achieve the program at the regional level. Because of autonomy he area can be used as an umbrella of strength to synergize programs across sectors, considering the implementation of continuous agricultural development activities still requires the support of various related sectors, in the framework of a more holistic Regional Development Planning policy. National level, synergy of concepts, programs and the strategy for achieving sustainable development as well as sustainable agricultural development, together being integrated programs among various development sectors, in this case through the coordination of various governmental institutions that exist and are at the same time related to national development programs. Until the program of sustainable development and sustainable agricultural development can be implemented, in accordance with the provisions that have been agreed internationally, as stated in the Agenda 21.

**The Potential Of Organic Farming To Endorse Sustainable Agriculture .**

The concept of sustainable agriculture integrates three main goals environmental health, economic profitability, and social and economic equity. The concept of sustainability rests on the principle that we must meet the needs of the present without compromising the ability of future generations to meet their own needs. The conservation of natural resources is critical for the agricultural sector which ensures long term sustainability.

The rigorous reliance on chemical fertilizers and pesticides always questions the concept of sustainability in its all aspect. It harms environment and the food chain. The use of chemicals in farming have serious long term effects on the environment. These chemicals contaminating soil and water sources, there by it enters in to the food chain. In addition to this, when cattle consume foliage that contains these chemicals become highly concentrated in the flesh and milk of dairy cows. Ultimately, it creates serious health problems to people who consume dairy products. Organic agriculture avoids all kinds of practices which damages agro ecosystem. It provides healthy food while establishing an ecological balance to prevent soil fertility or pest problems. In order to alleviate all environmental and social problems arising from chemical based farming, the promotion of organic farming is indispensable.

Other than environmental problems, chemical fertilizers and pesticides based farming creating so many economic destitutions to the farmers. The un sustainable farm practices have negative impact on farmer‟s health and long term returns of farmers. The increase in use of pesticides and fertiliser leads to the increase in cost of

The results of the study show that if organic farming is carried out properly it will quickly recover the diseased soil due to the use of chemicals. This happens when soil fauna and beneficial microorganisms are restored to life, and soil quality is enhanced by the provision of organic materials because there will be changes in the physical, chemical and biological properties of the soil.

Organic farming provides several benefits such as biodiversity conservation, environmental degradation reduction and integrating growers into high value food chains.( Rezaul Karim The idea of Sustainable agriculture incorporates three main targets such as environmental healthiness, economic prosperity, and social and economic equity. The notion of Sustainability rests on the standard that we must meet out the requirements of the present without compromising the ability to access future generations to meet their own needs.

The conservation of natural resources is crucial for the agricultural sector which guarantees long-term sustainability. The exact dependence on in organic fertilizers and pesticides always questions the idea of sustainability in its all aspect. It troubles environment and the food chain. The use of chemicals in farming has severe long term effects on the environment These chemicals contaminating earth and water resources, thereby it enters in to the food chain. In addition to this, when cattle munch foliage that contains these chemicals become highly concentrated in the flesh and milk of dairy cows. Ultimately, it creates serious health problems to people who consume dairy products. Organic agriculture evades all kinds of practices of inorganic farming which damages in the agroecosystem.

An organic agricultural practice offers healthy food while establishing an ecological balance to prevent soil fertility or pest troubles. In order to alleviate all environmental and social nuisances arising from chemical based farming, the promotion of organic farming is essential. Other than environmental issues, in organic fertilizers and pesticides based farming creating so many economic destitutions to the farmers. The un sustainable farm practices have harmful impact on farmer’ health and long term income of farmers.

Organic agriculture is a production system that sustains the healthof 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.Use of farming methods can maintain or even increase the fertility of the soil, while producing healthy, diverse food locally for people (Altieri, 2002; Pretty, 2006 in John PAULL) .

Organic farming is a production system, based on renewal of ecological processes and strengthening of ecological functions of farm ecosystem to produce safe and healthy food sustainability. Organic farming avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators, and livestock feed additives. To the maximum extent feasible, organic farming systems rely upon crop rotations, crop residues, animal manures, legumes, green manures, off - farm organic wastes, mechanical cultivation, mineral-bearing rocks, and aspects of biological pest control to maintain soil productivity and tilth, to supply plant nutrients, and to control insects, weeds, and other pests.

In contrast to modern systems, organic agriculture represents a deliberate attempt to make the best use of local natural resources. The aim of organic agriculture, also known as ecological or biological agriculture, is to create integrated, humane, environmentally and economically viable agriculture systems in which maximum reliance is placed on locally or farm - derived renewable resources, and the management of ecological and biological processes. The use of external inputs, whether inorganic or organic, is reduced as far as possible. Recent years have seen a dramatic increase in adoption of organic agriculture in industrialized countries. The important thing for most organic farmers is that it represents a system of agriculture rather than simply a set of technologies. The primary aim is to find ways to grow food in harmony with nature. The term organic is “best thought of as referring not to the type of inputs used, but to the concept of the farm as an organism, in which the component parts the soil minerals, organic matter, micro-organisms, insects, plants, animals and stable whole.(Desmukh and Babar ) .

Sustainability is about ecosystem integrity, social well-being, economic resilience, and good governance. According to the current state of knowledgeand development, how does organic agriculture contribute to each of the sustainability dimensions? Sustainability has first been equated with environmental soundness in orderto ensure the continued provision of goods and services to present and future generations. Organic agriculture, as defined by the Codex Alimentariu sCommission, "is a holistic production management system that avoids use ofsynthetic fertilizers, pesticides and genetically-modified organisms, minimizespollution of air, soil and water, and optimizes the health and productivity of interdependent communities of plants, animals and people.". .

Good governance is ensured in organic systems because transparency and traceability are provided through the organic label. Legal protection of the organic claim ensures fair competition of farmers, as well as protection of consumers and the right to choose. Compliance is ensured with clear environmental and, sometimes, social standards. The food system, from standard definition to labeling, is based on participation and necessary publicprivate partnerships, whereby smallholders are integrated into highly demanding markets. Last but not least, the diversity of food cultures and traditional knowledge are safe guarded by organic agriculture.( Scialabba, N (2013).

**Strategies of Organic Farming Development**

If we see the big role of the role of organic agriculture in preserving the environment and providing food that is safe for consumption by the community, of course a strategy is needed to develop organic agriculture to support sustainable agriculture in Indonesia. The strategies that can be developed in order to support the development of organic farming can be seen below :

1. Technology for Improving Farm Productivity.

The important role of research and development is well recognized in terms of providing the technology to enhance farm productivity, such as in the areas of plant protection using new biological tools and methods, soil management and organic fertilization, genetics and breeding to obtain natural resistance and to overcome biological stress, etc.Many conventional farmers consider converting to organic farming due to the rapidly growing market for organic products and the prospect of higher prices. However, they are also aware that organic farming may entail some constraints and possibly higher costs, and are therefore unsure whether they will be economically better off in the end if they convert.. In this regard, the most important economic parameters that should be analyzed are :

1) possible fall in yields (with the possibility of recovery later);

2) difference in production costs (labor costs tend to increase in particular); and

3) price difference (organic prices tend to be higher, but not always).While all these parameters vary over time, which implies that various scenarios should be considered, a crucial factor here is the availability of information and technology to ensure farm productivity and to cushion farmers from the impact of conversion.

2.Distribution and Marketing.

In most major organic product markets such as the industrialized countries, demand for organic products far outstrips domestic supply, and therefore imports are required to fill the gap. This represents a major opportunity for developing countries in Asia, but marketing and distribution appear to be a major constraint for small-scale farmers. Another issue is meeting the demanding quality and safety standards of major markets.

In many countries in the region, many factors contribute to additional costs in marketing the products: inspection and certification fees, segregated storage, fewer options to control post-harvest pests and diseases, need for careful handling to avoid dilution and contamination, appropriate packaging and labeling, and economies of scale. Organic producers comprise a smaller proportion of the agricultural industry with individual producers being usually small-scale and widely dispersed. Hence, more and more small-scale farms will need to form themselves into production and marketing teams to enlarge the scale of production and marketing.

3. Regulation and Certification

In recent years, an expanding number of governmental regulations for organic products have developed worldwide in parallel with private systems. However, while the purpose of certification is to foster confidence of consumers and to enhance trade in organic products, the certification requirements and regulations today are somewhat becoming an obstacle to the development of the organic industry, especially in the developing countries.

There is undoubtedly a need for harmonization of organic guarantee systems not only between the private and public sectors, but among countries and markets of the world to sustain and further enhance trade in organic products and the livelihood that this trade supports. A better understanding of the appropriate roles for government and private bodies in standard setting, certification and accreditation is required. An international mechanism for establishing equivalence among these systems is regarded as the best approach to the problem, one that respects diversity in organic agricultural systems and where variations in standards are allowed where appropriate.**.**

3. Approaches

Organic agriculture has spread all over the world. The three approaches to the development of organic agriculture are as follows: (1) a development approach for subsistence/self-reliantcommunities, (2) an income generating approach, and (3) a nature conservation approach.

1. First, the subsistence/self-reliant communities approach proposes the development of organic farming based on self-production and consumption of the communities that will make the communities self-reliant or independent. Through this approach, the communities know and are assured where and how the agricultural products are produced since they are produced and consumed in their own communities.
2. Second, the income generating approach emphasizes the development of organic farming based on its profitability with its premium price and niche market. Although the philosophy of organic farming is living in harmony with nature by avoiding the use of chemo-synthetic inputs, the consumers of organic produce are from the middle and high classes who are willing to pay a relatively higher price.
3. Third, the nature conservation approach puts emphasis on the importance of organic farming in conserving nature, including the living creatures and their environments. Some organizations, mostly NGOs, with strong idealism about nature conservation had convinced the farmers to practice organic farming, and consumers to consume organic products. The connection of local NGOs with foreign ones implied that the development of organic farming through this last approach have already spread worldwide.

5. Sustainability

The practice of conventional agriculture had threatened the sustainability of the Earth and human health. The intensive use of chemo-synthetic inputs had degraded agro-ecosystemsand human health. For example, chemo-synthetic pesticides had killed not only pests but also other organisms in the agro-ecosystem; high pesticide residues have been reported to have poisoned people in some areas; and the intensive use of chemo - synthetic fertilizers had degraded the land and polluted the water.

The sustainability of organic farming can be seen from three aspects: economic; social; and environmental. First, in terms of economic aspect, organic farming by avoiding the use of external chemo-synthetic inputs will reduce production costs. Considering the premium price of organic produce, farmers will achieve higher profitability. Based on several experiments, although the yield will decrease in the early adoption, yield will increase later and then become constant. Thus, organic farming is considered economically viable. Second, the social aspect can be seen from the social interactions, cultural, political and human development. Thus, in terms of social aspect, sustainability of organic farming can be achieved through good community building. Third, in terms of environmental aspect, organic farming directly ensures environmental sustainability..

6. Extension

The full support of the Government became the key to the success of Green Revolution. In Indonesia, for instance, besides the package of technology, the Government also established institutions, such as farmer groups and cooperative village units, and extended financial support such as credit. In terms of technical assistance, extension officers were provided to help the farmers in adopting the technology. 2) The organic farming movement was a protest to the Green Revolution, that despite increasing food production, it had negative impact on the environment and human health.NGOs have played important role in organic farming extension. Based on community building, these NGOs convinced the farmers to convert to organic farming, gave them technical assistance on cultivation techniques, and developed market network. They also helped increase consumers’ awareness of human health and the environment thus creatinga market for organic produce. One important point in organic farming extension by NGOs is that the NGOs supervised farmers in production and marketing so the farmers can market their produce and earn profit. In Indonesia, NGOs have played an important role in organic farming development. Although the NGOs put emphasis on increasing the awareness of the importance of nature conservation, the main reason why farmers convert to organic farming is the economic reason, that engaging in it will increase their income. (Jahroh S, 2010).

7. Increase Consumer Awaraness

It can be done by seek to increase consumre awareness of locally produced organic food and in season organic produce.

8. Training and Education

It is needed to increase farmers skill in orgabic farming by (1) organic courses shoud increase emphasis on markets and linkages tp processors (2) encourage third level educational institution to incorporate an organic modules (3) Work with existing organic training providers to identify and co-ordinate the training needs of the sector.

9. Organic farming Scheme

It is also important for develop organic agriculture with (1) seek to enhance the effectiveness ot the new organic afrming scheme as a means of maintaining current level of participation in the organic sector and attracting new entrants. (2) seek to enhance the effectiveness of the scheme in responding to the market demand for organically produced foor.

10. Market Development

There are many ways to develop organic through market development (1) identify spesifis domestic and export marke and engage with stakeholders to develop supply chain meet demand (2) Support organic farmer groups to develop their potential, (3) Support the formation of producer groups and co-operatives tp facilltate growth in the sector through developent of further market opportunities and associated infrastructure requirements. (Talmhaiochta, Mara,B,A, 2013)

**Conclusion**

Organic farming in Indonesia can still overcome problems that must be solved. In developing organic agriculture in Indonesia there are many parties involved in it, both human resources, technical and management in the field so that strategies need to be sought for its development.

**Recomendatition**

Further development of organic agriculture in Indonesia must be aimed at technology for improving farm productivity, distribution and marketing, by increasing market opportunities for organic products, both domestically and globally by establishing partnerships between farmers and entrepreneurs engaged in agriculture. Strengthening supporting institutions such as farmer groups, extension agents, and marketing institutions, approaching the community with empowerment activities. Another thing to note besides the above problems is the need for government policies for the sustainability of agricultural programs and design organic farming scheme , training education also regulation and certification with the development of organic product certification institutions so that organic agriculture can support sustainable agriculture in Indonesia.

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