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Outlook of Present Organic Agriculture Policies and Future Needs in Sri Lanka

Abstract. Many countries are formulating organic agriculture or organic farming policies aimed at sustainable agricultural development. Therefore, the objectives of this study were: to understand the present situation of organic agriculture policies in Sri Lanka and also in other countries where successful organic agriculture is operating; identify problems in the organic agriculture sector; and suggest potential policy measures to be implemented in Sri Lanka in future. The research was conducted in two stages. In the first stage, a thorough literature review was conducted to study the suitable policies available in other countries and also in Sri Lanka at present. In the second stage, two field surveys were carried out using pre-tested questionnaires, from December 2019 to May 2020, in order to gather farmers' and extension officers' information related to organic farming policy suggestions. According to the findings of the literature review, organic systems in some countries are more integrated with national strategic plans and visions. Those governments are more involved in new initiatives and farmers are encouraged to go organic through reliable and feasible policies. Although Sri Lanka has a high potential for organic agriculture, at present it is at an initial stage. While most organic products in Sri Lanka go to the export market, a small portion is kept at local markets. Demand for organic products in export as well as domestic markets is increasing. Even though there are seven international food certification agencies operating in the country as external inspection and certification bodies, a limited number of accredited certifications exist for products on the domestic market. Results of the farmers' survey showed that even if farmers have a significant level of knowledge, few of them practice organic farming due to several existing problems. Moreover, extension officers have also identified similar types of problems that are faced by the farmers related to organic farming. Evaluation of Strengths, Weaknesses, Opportunities and Threats (SWOT) related to organic agriculture in the country helped to identify key problems facing policy-makers when balancing the supply and demand sides of organic products. Also, in developing organic agriculture, an effective linkage and coordination among government and private participants is crucial. Therefore, in Sri Lanka in this context, strategic focus on policy support for organic agriculture is needed. Current organic farming programs need to be revised in order to formulate policies covering all areas related to production, handling, processing, certification, labeling and marketing, in order to bring the benefits of organic agriculture to farmers, marketers and consumers in a fair manner.

Key words: conventional agriculture, organic agriculture, organic farming policies, Sri Lanka

JEL Classification: Q01, Q16, Q18

Introduction

Organic agriculture is becoming more popular in most countries around the world. Organic agriculture can be explained as an agricultural system that uses ecological-based pest control methods, biological fertilizers and nitrogen-replenishing cover crops (Kristiansen, Taji, & Reganold, 2006). Although there are a number of definitions for organic agriculture, the most commonly accepted is the definition introduced by the International Federation of

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Organic Agriculture Movements [IFOAM] in 2008. It states that "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 sciences to benefit the shared environment and promote fair relationships and good quality of life for all involved". Furthermore, organic agriculture is being considered as a solution for the issues arising due to conventional agricultural practices (Cidón, Figueiró, & Schreiber, 2021). It is a process, using agronomic, biological, and mechanical methods, as opposed to using synthetic fertilizers and pesticides, to enhance the sustainable farming system (Yadav, et al., 2013).

Thus, organic food can be explained as products that are processed without adding any artificial fertilizers, pesticides, additives and genetically modified organisms. The impact on food quality, nutrition and human health has been the core concern of organic farming. Although food quality can be considered a private good, many governments have included the provision of food safety in their policy objectives (Gupta, 2017). Since the mid-19th century, organic farming has gained significant attention from different groups, such as policy-makers, consumers, environmentalists and farmers in many countries, all of whom are increasingly involved in regulating and supporting organic food production. Reflecting the multiple goals of organic farming and quality management, a complex range of policy measures need to be developed and implemented (Kampus, 2017). Different countries have developed organic farming policies with an objective of developing the sector more successfully and rapidly (Ganapt et al., 2017).

Organic farming in the world

Currently, organic farming is practiced in 178 countries around the world (Willer, 2012). Global development of organic agriculture showed a positive trend during the past decade because of its importance. Many countries have recorded a significant increase in the consumption of organic food (Organic Food Global Market Report, 2021). In 2021, the global organic food market rapidly bloomed from USD 201.77 billion in 2020 to USD 221.37 billion, obtained with a compound annual growth rate (CAGR) of 9.7%. By 2025, the organic food market is expected to reach USD 380.84 billion (Organic Food Global Market Report, 2021).

In 2019, 72.3 million hectares of organic farm lands were present in the world (IFOAM – Organics International, 2021). Based on the findings of the Organic Trade Association in the USA, there was USD 45.2 billion of growth (6.4%) in 2017, and another 5.5% of growth in 2018. There were 40.6 billion consumers reported for the organic food market in 2018 in the USA, and in Canada, 3.1 billion consumers in the same year (Willer & Lernoud, 2018). Meanwhile, the European organic food market net worth developed from EUR 20.8 billion in 2012 to EUR 37.4 billion in 2018. This represented a 79.8% sales increase. And also, organic farm lands expanded from 10 million hectares in 2012 to 13 million hectares in 2018 (Willer & Lernoud, 2018). Nevertheless, the country with the largest organic food cultivating area was Australia. It represented 35.7 million hectares (51%) of the certified organic land area from the total organic farm lands worldwide (Organic Industries of Australia, 2019).

As per the world organic marketing statistics, the most consumers of organic products for 2019 were from the US (EUR 47.4 billion sales), 42% of the share of world organic food

markets, followed by Germany (EUR 12 billion sales) and France (EUR 11.3 billion sales). In 2018 the largest single market was the US 42 % followed by the European Union (EUR 41.4 billion, 39 %) and China (EUR 8.5 billion, 8 %) for organic products. Asian countries like India and China have organic markets at global level due to an increase in demand (IFOAM – Organics International, 2021). At present, organic farming in India has been promoted in states through specific programs under "Paramparagat Krishi Vikas Yojana". The Indian government is providing assistance to farmers for organic cultivation, certification, labeling, packing, transportation and marketing of organic produce under this scheme and "Rashtriya Krishi Vikas Yojana" with the mission of integrated development of horticulture, a network project on organic farming under the activities of the Indian Agricultural Research Institute and national programs for organic produce under the Exports Development Authority (Narayanan, 2005). In order to promote the organic agriculture in Taiwan, the national Ilan University and the Yilan Irrigation Association collaborated to organize an international workshop entitled "Developing Organic Agriculture as new business opportunity for Small-scale Farmers". The workshop aimed to serve as an avenue for the discussion on current developments and policy issues which are relevant to organic agriculture as well as different approaches and practices implemented by organic farming stakeholders of the country (Food and Fertilizer Technology Center, 2018).

Background of organic agriculture in Sri Lanka

Sri Lanka is an agricultural country and farming is the back bone of its economy. The country bears a fertile land which has the potential to cultivate a variety of crops. The agriculture sector contributes about 8.36 percent to the national GDP (Central Bank Report, 2020). Agriculture is the most important source of employment for the majority of the Sri Lankan workforce, especially for people in rural areas. It also plays an important role in the implementation of strategies targeted towards sustainable development of the country (Sri Lanka National Agriculture Policy, 2009; Dabbert, Haring, & Zanol, 2004). Among most developing countries, Sri Lanka has a higher biodiversity and suitable climatic condition for organic food production (Sri Lanka Export Development Board, 2020).

Traditional organic agricultural activities have been practiced in some parts of the country for many years with indigenous knowledge of rural farmers. Due to these traditional agricultural practices, normal organic agriculture is not a novel concept in Sri Lanka. It was based on chemical-free practices and local natural resources. They highly contributed to the development of ecological agricultural systems in the country. The Kandyan home garden system is one of the best examples of the previously practiced cropping systems in Sri Lanka. It was a well-balanced eco system that played an important role in protecting biodiversity and the environment in the country (Vidanapathirana and Wijesooriya, 2014). Others were "chena" cultivation for field crops, crop rotation system and agro forestry system. These systems were efficient and effective practices. However, present organic farming is different from traditional organic farming in many ways (Sri Lanka Export Development Board, 2017). Thus, present development of organic agriculture in Sri Lanka needs to be done in a way that protects the land for future generation, producing high quality food and also using suitable agricultural methods.

As a country full of natural resources, Sri Lanka has a big potential to fulfill a considerable portion of the ever-growing market demand for organic products. And also, its organic food supply chain obtains an upper grade level. For instance, the value addition of tea from 1998 to 2001, purely due to its organic labeling, is equivalent to the additional production of about one million kg of conventional teas. This is an encouraging indication to any government to support the organic sector as there is no capital investment to clean the environment. Also, the profitability of organic production is similar to those of comparable conventional farms, with variation between products and countries (Sri Lanka Export Development Board, 2017; Weerawardana, 2014). Therefore, organic farming has proven to be financially advantageous to conventional farming (Cidón, Figueiró, & Schreiber, 2021; Crowder and Reganold, 2015). Other than these opportunities, direct financial benefits are also gained from organic exports (Sri Lanka Export Development Board, 2020; Vidanapathirana and Wijesooriya, 2014).

Organic agriculture is highly important for the sustainable development of a country and it can give better results under correct policy mechanisms. Although the Sri Lankan government has been involved in conducting various training programs for organic agriculture, they are not fully successful in providing sufficient levels of training to organic farmers due to many issues and challenges. Meanwhile, farmers are increasing their use of agro chemicals from time to time (Kariyawasam, 2010)

Literature related to research studies on policies and programs on organic agriculture is hard to find at present in the country. Therefore, the general objective of this study was to explore the present situation of the organic agriculture sector and suggest relevant policies to develop organic agriculture in Sri Lanka. This was reached by using two specific objectives: studying the organic policies in other countries which have successful organic agriculture and assessing the views of farmers and extension officers towards organic agriculture activities of the Sri Lanka.

Methodology

This study was conducted in two stages. At the first stage, a literature review was conducted by referring to a number of research reports, relevant books, journal articles and news articles to understand the current situation of organic agriculture policies in other countries and also in Sri Lanka. At the second stage, two Field surveys were carried out using 300 randomly selected farmers and 120 extension officers in the Rathnapura district. The Rathnapura district was purposely selected as the study area, since it is one of the main farming areas, having a very good climatic and agro-ecological condition for farming activities and also a large number of people with long-term experience in various types of farming practices. Furthermore, there are some traditional farming and allied activities. Two surveys were mainly conducted to identify the Strength, Weaknesses, Opportunities and Threats (SWOT) of the existing organic sector in Sri Lanka in order to identify the possible policy suggestions. A SWOT analysis was conducted since it is a structured planning method specially used to assess both internal factors (strengths and weaknesses) and external factors (opportunities and threats) related to organic farming. These two surveys were supported by a few focus group discussions with some successful farmers and also a few experienced extension officers to identify new areas for policy improvement. The study was conducted

during the time period from December 2019 to May 2020. Data analysis was done using descriptive statistics.

Results and discussion

Present situation of organic farming in Sri Lanka

Organic food production has considerable potential in Sri Lanka and it reaches both export and domestic markets. The domestic market is a growing market which mainly consists of urban, educated and rich communities (Kariyawasam, 2007). In 2014, there was 62560ha of land under organic management in the country. In 2017, the area under organic management was 165553 ha. The agricultural land area under organic farming increased substantially from 62,560 ha in 2014 to 165,553 ha in 2017 (Table 1).

Table 1. Organic agriculture areas in Sri Lanka

Year	Organic agriculture area (ha)
2014	62560
2015	96318
2016	96318
2017	165553

Source: FiBL Statistics - European and global organic farming statistics, 2019.

The number of organic farmers gradually increased during 2014-2017 time period. Sri Lanka has a higher number of organic farming lands and a higher share of organic land among the Asian countries. The volume of organic exports from Sri Lanka increased from 4,216 MT in 2007 to 44,300 MT in 2018 and the value of organic exports reached Euro 259 million in 2015 (Willer, Lernoud, and Kemper, 2019.) Supermarkets are the most dominant local marketing method of organic products. In some shops, a separate section has been allocated for organic products. There is an increasing demand from the general public for organic food items. This is happening as understanding of the health and environmental benefits of organic food is increasing within the population (Hapuarachchi, 2016). However, the higher price of organic food is acting as a barrier for buying these products by most of the people.

Organic product standards and certifications in Sri Lanka

Over the last decade, production and certification of organic commodities has grown rapidly throughout the world. Currently, 130 countries produce certified organic products in commercial quantities (Raynolds, 2004). Organic agriculture in Sri Lanka has developed over time, by increasing the number of crops, crop varieties and cultivating areas. But there is a limited number of accredited certifications or standards available for the domestic market. At present, there are more than 15 programs with a variety of more than 20 crops involved in growing, processing and trading as certified organic products.

Organic certification is taking place in Sri Lanka under two categories: as certification for the international market, and for the local market. Presently, there are seven international food certification agencies operating in the country as external inspection and certification bodies: the Institute for Market Ecology (IMO, Switzerland), NASAA (Australia), Naturland (Germany), EcoCert (Germany), Demeter and BioSuisse (Switzerland), Organic Farmers and Growers Ltd (United Kingdom), and Control Union (SKAL, Netherlands) (Sri Lanka Export Development Board, 2017). The Sri Lanka Export Development Board (SLEDB) is setting up an independent body to obtain a third-country registration in Europe. This controlling authority governs the organic sector in the country and registering Sri Lanka in the third-country list of the European Union (EU) reduces the cost of certification and facilitates its organic products to penetrate the EU member countries.

Among organic standards, the standard of the Sri Lanka Standards Institution (SLSI) is a pioneering one, with a certification body for the domestic market. However, the international food certification agencies also certify organic products for export as well as the domestic markets. Moreover, a community-based organic certification system named "Organic Participatory Guarantee System" (PGS) is also operating in Sri Lanka. It is based on the IFOAM (International Federation of Organic Agriculture Movements) International Norms for organic production and processing. Each producer who wants to participate in the organic PGS must sign an organic producer promise to confirm their commitment to these standards. For independent producers, the promise must be signed by whoever is responsible for onsite practices (e.g. the owner or the farm manager). For producer groups, each individual member must review and sign a promise. In addition, the Sri Lanka Organic Agriculture Movement is presenting certification services offered by SriCert as a locally originated certification body.

Existing supports and policies for organic agriculture in Sri Lanka

The present government policy on agriculture is aiming to provide chemical fertilizer to the farmers at an affordable price in order to meet the national food requirement. However, this has led to overuse of inorganic fertilizer. As the global trend in using natural inputs in food production is clearly visible, Sri Lanka also responds to this global movement by policy reviews, specially focusing on environment issues (Vidanapathirana and Wijesooriya, 2014).

At present, the agriculture sector of Sri Lanka is facing a serious challenge of protecting the environment while gaining better harvest using applied inputs. Therefore, a national policy has to be formulated to maximize production while minimizing the adverse effect on the environment (Vidanapathirana and Wijesooriya, 2014). Currently, the Export Development Board of Sri Lanka has immensely assisted in promoting the organic sector of the country by assisting exporters in seeking new markets for organic products. Some government institutes have also recently launched programs to identify the potential areas and producer groups for organic agriculture.

Sri Lanka has formulated a national agriculture policy in order to build a nation with an agricultural sector of environmentally prudent, economically productive, nutritionally sound and secure food production. Although Sri Lanka has still not formulated a policy for organic farming separately, there are provisions to adopt technologies in farming that are environmentally friendly and harmless to people's health. They can be presented as follows.

- Promotion of good agricultural practices such as Integrated Pest Management (IPM) and Integrated Plant Nutrition Management (IPNM), for the development of the agriculture sector.
- Promotion of production and utilization of organic fertilizers and bio-fertilizers to gradually minimize the use of chemical fertilizers through Integrated Plant Nutrition Systems (IPNS).
- Minimize the use of synthetic pesticides/ chemical fertilizers through promoting bio-pesticides and Integrated Pest Management (IPM).
- Promote production and use of environmentally friendly bio-pesticides with public and private sector participation.
- Foster, preserve and disseminate traditional agricultural knowledge related to organic farming, pest management, preservation and processing of food for nutritional and medicinal purposes and facilitate exchange of such knowledge among the farming community.

Furthermore, the Sri Lanka Council for Agricultural Research Policy declared national research priorities in organic agriculture during 2017-2021. Accordingly, the following are the research needs in organic agriculture.

- Decreasing the conversion period, when shifting towards organic agriculture.
- Efficient pest, disease and weed control measures for organic agriculture.
- Analysis of harmful residues in organic products available in the market.
- Separately identifying the naturally occurring substances and pollutants/contaminants.
- Scientific basis of some organic / traditional techniques.

Although the Sri Lankan government has formulated these strategies, they are still not functioning well. This indicates that Sri Lanka is behind other countries in the aspect of implementing organic agricultural policies.

Farmers' and extension officers' view on organic farming policies

Two field surveys were conducted to study the farmers' and agricultural extension officers' view on existing problems related to organic agriculture policies in the country. Table 2 shows the responses of farmers, and Table 3 shows the responses of agricultural extension officers.

According to the farmers' responses (Table 2), they have several problems regarding organic farming. Among them, longer conversion periods from conventional farming into organic farming, effect of neighboring farmers who are doing conventional farming and high cost of production. Regarding certification of organic products, both lack of knowledge about the procedure and high cost of the service were serious problems. Moreover, they had marketing problems such as finding market places and getting good prices for their produce.

Table 2. Farmers' responses on present problems of organic agriculture (n=300)

Problem	Frequency	Percentage	Rank
Lack of awareness about organic farming	44	14.7	10
Difficult to find necessary inputs	137	45.7	9
High cost of production	181	60.3	5
Problems in pest and disease control	164	54.7	7
Longer conversion period to organic farming	224	74.7	1
Effect of neighboring conventional farmers	205	68.3	4
Lack of knowledge on certification process	218	72.7	2
High cost of certification process	210	70.0	3
Difficult to find markets	168	56.0	6
No better price for organic products	147	49.0	8

Source: Field survey.

Table 3. Extension officers' responses on present problems of organic agriculture (n=120)

Problem	Frequency	Percentage	Rank
Poor knowledge of farmers about organic farming	20	16.7	9
Difficulties in finding inputs	52	43.3	8
High cost of production	70	58.3	5
Longer conversion period	87	72.5	2
Effect of neighboring conventional farmers	84	70.0	3
Lack of awareness on organic certification	90	75.0	1
High cost of organic certification	82	68.3	4
Problems in finding Markets	59	49.2	6
Low trends of consumers to buy organic products	55	45.8	7

Source: see table 2.

As per Table 3, extension officers have also identified a number of problems faced by the farmers regarding organic farming. Among them were cultivation-related problems such as longer conversion period, effect of neighboring conventional (chemical) farmers and high cost of production. The lack of awareness about organic certification and high costs involved in the certification process which made the organic food production process more complicated were also seen as significant. Finding markets for organic products and low trends of consumers to buy organic food were also serious problems. Thus, it is clear that both parties (farmers and extension officers) have recognized more or less similar problems in organic farming. If it is possible to find suitable remedies for these problems, organic farming can be developed successfully.

Comparison of organic farming policies between Sri Lanka and other leading countries

As a whole, the organic system in Sri Lanka is not well developed like in leading regions such as the EU or USA. Organic systems in those regions are more integrated with national strategic plans and visions. They are more stable, and governments are more involved with these activities. New initiatives are being taken and farmers are encouraged to go organic through reliable and feasible policies. Unfortunately, there is a lack of these comprehensive strategies in Sri Lanka. This is a big obstacle to achieving relevant policy goals.

Table 4. Comparison of organic agricultural policies between Sri Lanka and other leading countries

Category	**Sri Lanka**	**European Union**	**United States**
Organic action plan	Absent	Present	Present
Government aid	No subsidies or incentives are provided to organic farmers	Area payment in form of conversion area payment or maintenance payment or both are given	Subsidies during conversion period are provided by government. State support is also there
Inspection cost support	Absent	Present	Present
Training programs	Medium active	High active/ frequent	High active
Creating awareness among farmers	Low	High	High
Initial marketing support	Low level (few NGO's have made an effort to do this in some areas)	Present (the support is provided through Government Organizations (GOs) & Non-Government Organizations (NGOs)	Present (the support is provided through GOs & NGOs)
Awareness among domestic consumers	Low	High (Germany stands as second largest country in global organic market)	High (USA is the leading country in global organic market)
Domestic market	Least focused	Active and high	Active and high
Export market	Fair rate	High rate	High rate
Government involvement	Low	High	High

Source: Author's creation based on literature.

According to the information in Table 4, it is clear that there is a poor linkage between farmers and markets in Sri Lanka and the government doesn't play many roles in marketing and promoting organic foods. Even though the government gives various supports to the producer and consumer associations, there is not sufficient financial support. Poor farmers

have to bear the whole expense on their own from conversion of farming until certification of organic products. Although this may be feasible for large-scale farmers, it creates problems for small holders who represent a large proportion of the Sri Lankan farming community. Inability to supply according to demand is another problem due to lack of direct linkages between producers and customers. The supply chain between organic products and the processing industry in Sri Lanka is not well organized. Therefore, a proper plan has to be formulated by introducing refined agricultural technologies and innovations leading a better situation.

Major problems existing in organic agriculture sector in Sri Lanka

It is very important to assess Strengths, Weaknesses, Opportunities and Threats (SWOT) related to organic agriculture in a country. Therefore, in order to identify the possible policy suggestions, SWOT related to supply side as well as demand side of the organic agriculture sector were studied and information is presented in Table 5 and Table 6.

Table 5. SWOT analysis and policy suggestions to improve policy measures and framework related to supply side of organic agriculture in Sri Lanka

Strengths	Suggestions to improve policy framework
Indigenous knowledge of traditional farmers.	✓ Encourage groups in production of seed and planting materials by adopting the traditional concepts of seed village, seed banks and local seed distribution. ✓ Promote organic farming among rural communities by emphasizing its potential benefits for health, environment, economy and income generation. For that, animal and crop breeding, conserving local varieties of crops and development of varieties suitable to organic production systems are important. ✓ Scientific validation and documentation of ancient knowledge and existing practices of successful organic farmers. ✓ Introducing educational programs on organic agriculture with integrated and holistic farming activities.
Favorable eco-system (fertile soil, good weather condition) such as Kandyan home gardening.	✓ Educate students on the importance of eco-friendly farming and consumption of safe food at various levels.
Standing market experience.	✓ E-platform and mobile Apps for direct marketing of organic produce. ✓ Use role of stakeholders for development of organic food sector ✓ Create opportunities leading to organic area expansion. ✓ Adoption of group centric approach in production, certification, produce handling and marketing. ✓ Develop diverse channels for marketing of organic produce.
Food exporting opportunities	✓ Facilitate farmer linkages with exporters and promote Sri Lanka's organic products at international fairs. ✓ Registration of exporters and local parties involved in organic sales.
Satisfactory organic farming teaching and training programs are available.	✓ Organize regular events such as trade fairs, workshops to demonstrate the importance of organic food. ✓ Assist, support and guide in the formation of farmer associations/ farmer producer organizations. ✓ Adopt participatory approach in planning and implementing programs related to organic farming.

Opportunities	Suggestions to improve policy framework
Extension officers are highly supportive of organic agriculture.	✓ Introduce new technologies to extension officers for more innovation ✓ Undertake participatory research programs involving organic farmers at different agro climatic zones and develop integrated, remunerative and adaptive organic farming systems.
Government provides some contribution and encouragement towards organic farmers.	✓ Register all training institutes and set up organic export villages. ✓ Reward farmers' innovations in organic agriculture.
There are a few ongoing supportive finance projects for organic farmers.	✓ Subsidy should be provided for policy programs with financial implications.
NGOs encourage organic farming and exporting	✓ Processers, NGO's, exporters should be responsible for conducting farming activity, monitoring, evaluating and exporting the organic produce.
Weaknesses	**Suggestions to improve policy framework**
Irregular supply of organic products	✓ Issue renewable permits for local sales, ✓ Establish storage and transportation facilities. ✓ Establish producer companies promoted by organic farmers.
Price fluctuation of organic products	✓ Formulate moderate prices so that organic products are accessible to more consumers. ✓ Establish public-private collaboration to support the organic sector, characterized by shared goals, respective assets and complementary roles and risk management in making organic policies.
High conventional period to start organic farming	✓ Assist farmers in converting to organic agriculture by providing incentives and facilitating a market for products during the conversion period.
Difficult to find necessary inputs	✓ Promote the recycling of agricultural and food waste into the organic farming system. ✓ Orient seed breeding and seed testing towards organic production. ✓ Strengthen soil and ensure water conservation measures. ✓ Ensure availability of quality organic manure to the farmers. ✓ Ensure seed sovereignty and farm inputs for organic farming. ✓ Promote a mixed farming approach and encourage the use of renewable energy sources.
High cost of inputs	✓ Provide conventional subsidies. ✓ Provide government subsidies for the input distribution system.
Problems of pest and disease	✓ Certification bodies or agencies should conduct the inspection and certification process. ✓ Registered inspection bodies.
High cost of certification process	✓ Establish third country registration unit such as NOCA (National Organic Control Authority). ✓ Develop a simple certification process in the country for all organic farmers. ✓ Incentives to fully certified organic farms and small-scale farmers.
Poor knowledge of farmers about organic farming	✓ Launch a district-wide intensive campaign on organic farming. ✓ Popularize organic farming in cities in the form of urban farming, kitchen/ terrace/ vertical gardening, etc.
Threats	**Suggestions to improve policy framework**
High competition with other countries	✓ International and national organizations provide accreditation to certifying agencies and supervise the development and implementation of organic standards and policies for organic products.
Seasonal availability of products	✓ Stakeholders take part in the supply chain with different function and farmers should be responsible for the production of certified organic produce. ✓ Use of storage facilities & domestic market development strategies.
Lack of government support	✓ Render assistance to organic and health shops ✓ Render assistance from media to promote organic export ✓ Establish a permanent body for the consultations between government and the private sector.

Source: Author's own elaboration.

Table 6. SWOT analysis and policy suggestions to improve policy measures and framework related to demand side of organic agriculture in Sri Lanka

Strengths	**Suggestions to improve the policy framework**
Demand is gradually increasing	✓ Develop model for sustainable organic farms in the country. ✓ Promote farm level processing, value addition and encourage the use of organic farm produce in food industry.
Opportunities	**Suggestions to improve the policy framework**
High demand for organic produce locally and internationally	✓ Establish mission with a team of professionals drawn from different sectors to implement the policies and programs of organic farming in the country. ✓ Develop a government-empowered committee, in consultation with an advisory committee on organic farming, to create guidelines and finalize them. ✓ Review the validity of policies as needed, with prior approval of the government.
Imagined market and untouched market	✓ Collect data about organic production and markets annually, analyze it and make it available to the sector and policymakers. ✓ One government ministry should be assigned for the organic sector, paying special attention to disadvantaged groups.
Weaknesses	**Suggestions to improve the policy framework**
Lack of market information about organic food	✓ Establish Market information systems (MIS).
Most of organic foods are not available in the market.	✓ Develop cooperative and small pioneer companies ✓ Establish a promotional council of producers, traders, and industrialists to promote organic trade.
Unavailability of continuous supply in the market.	✓ Enable farmers to mitigate and adapt to climate change effectively (promote cultivation of healthy foods as protections against climate change). ✓ Maximize crop and farm diversification, thereby enhancing protection against crop losses due to adverse weather conditions.
Poor awareness of consumers	✓ Pitch media releases and success stories through print, electronic and social media to draw public attention. ✓ Build the feeling of goodwill and loyalty amongst the producers in rural areas and consumers in cities. ✓ Organize campaigns and events to raise awareness of the benefits of organic agriculture. ✓ Consumer education and awareness should be actively promoted.
Low level of trust about organic food.	✓ Awareness programs and workshops should be continuously conducted ✓ Promote proper certification of organic products
High cost of production	✓ Set up Internal Control System for local inspection.
Threats	**Suggestions to improve the policy framework**
Difficult to differentiate organic and non-organic products.	✓ Establish new certification bodies within the country. ✓ Create and strengthen local institutions for effective service delivery and sharing of knowledge and skills.
Untrusted products are available in the market.	✓ Penalize fraudulent sellers ✓ Introduce a common seal for certified organic products in Sri Lanka.

Source: Author's own elaboration.

Sri Lankans practice organic agriculture because of increasing demand for organic products. For this reason, the government should emphasize promotion of organic agriculture through its policies and periodic plans. However, Sri Lanka is not much committed to such

endeavors. Thus, some important policies, laws and regulations regarding production and trading of organic agricultural products are yet to be formulated. Formulation of national standards of organic production and processing is an important step to opening doors for organic producers, promoters and certifiers to contribute to organic production in the country.

Key problems facing policy-makers are balancing of supply and demand initiatives and inability to identify the major problems of farmers when achieving sustainable development of organic agriculture. The gap between demand and supply still exists due to the paucity of effective and organize linkage between the producers and the actual marketers. Eventually, farmers are looking at the government to bridge this gap between demand and supply. Integrated action plans can provide one route to achieve this and for such achievement, a clear organic agriculture development policy, implementation of organic standards and certification programs, demarcated organic food production zones, organic-inorganic food price discrimination, necessary institutional arrangements related to organic farming and identification of priority activities are important. With several organic production programs in place and increased demand for organic produce, there exists an urgent need to develop an organized marketing system for organic produce. Since the promotion of organic farming is directly linked with market development, greater efforts are required to ensure adequate support through policy interventions to give focused attention towards strengthening supply chain components, getting consumers connected to the farmers directly, supporting the existing marketers and also encouraging new entrants to the field of organic marketing.

Suggestion for developing new policies and recommendations

Collaboration between government and private sector with organic agriculture

The need for public-private collaboration to support the organic sector is underlined by different factors such as shared goals, respective assets and complementary roles and risk management in making organic policies. Shared goals have not only the capacity to catalyze collaboration, but also potentially function to address tensions and resolve conflicts that naturally arise between these two parties such as standards setting, policy prioritization, or allocation of roles. Government policy roles and interventions directly influence the function of agriculture and its markets since the government is the final determinant of public policies, including allocation of funds. Therefore, it has a unique role in this regard. Organic value chains depend on standards, conformity assessment, identification preservation and labeling. Mostly, these are regulated by government as the government should ensure consumer and producer protection. It should facilitate trade and identify the potential of organic agriculture to contribute towards its sustainability goals and objectives. Thus, government should support the development of organic agriculture through a variety of policies and programs such as targeted subsidies, market development, capacity building and research support. Legislation for policy on organic agriculture can help achieve a broad range of sustainability goals including health of soil, water, air, climate change mitigation and adaptation, biodiversity, rural development, food security and poverty reduction.

Government alone can exercise authoritative controls in organic production and supply chains. The private sector can act as a repository of most of the knowledge and expertise as well as the zeal for organic principles and practices since it is the place where virtually all

the practices of organic production, processing and trading reside. Therefore, the production and value chain system operated by the private sector will help to achieve the objectives of government policies toward organic agriculture. This includes primary production, input production (seeds, plant protection products, and feed additives), manufacturing, ingredient sourcing, handling and trade, retailing and certification, etc. The private sector has produced the main agricultural innovations sustaining the sector in response to changing human needs, including the original systems of food standards, certification and labeling and more recently group certification of smallholders and participatory guarantee certification systems for local organic food markets. The private sector is able to find new solutions and innovations more quickly than government institutions because of their quick process of decision making. Also, the private sector can offer perspectives on the feasibility and impact of implementing government policies and programs in the sector. Therefore, collaboration of the public and private sector is very important at this juncture.

Understanding existing policy gaps and future policy needs

Policy instruments associated with organic agriculture in Sri Lanka are very fragmented. Integrating them in organic production, promotion and trading is crucial for achieving sustainable agriculture and higher economic growth. In order to deal with the aforementioned problems, the country should have a clear organic agriculture development policy specifying the roles of government as well as various private sectors. It should have better identification of the areas and commodities for organic promotion and needs to implement the standards and certification programs since organic certification is more a 'process' than ‘product' certification. In this context, standards should be developed that are specifically focused on suitable agricultural practices. Commodity-specific and location-specific organic production zones should be demarcated to encourage organic food producers and ensure the implementation of proper marketing mechanisms. Establishing standards for organic food and its operation is conducted by the National Accreditation Body, which maintains and enforces organic certifiers as per the National Food Standards of Organic Agriculture Production and Processing. Its activities and roles as well as production and marketing mechanisms should be guided and regulated by enacting suitable laws. For quality assurance, the production, marketing, storage and transfer – including processing of organic foods – should come under the purview of domestic laws. Establishment of such institutions helps to comply with the international regulations on organic production and trade.

Another important aspect is the identification of priority programs to be implemented including research, development, coordination, capacity building, quality assurance and available standards and regulations. Building capacity of extension service providers as well as that of producers and sellers through trainings is also important. They should be made well aware of national organic food standards, legislation and quality assurance of organic foods. Effective extension programs for educating consumers and producers about health, environment and social benefits of organic farming, promotion and documentation of indigenous knowledge and skills, cooperative development, group mobilization and provision of information regarding market opportunities (demand/supply), price premiums and consumers' preferences are also essential. For such implementation, an effective linkage and coordination among government and private participants is crucial. Explicit policies,

norms and standards relevant to the organic foods and clarity in enforcement of legislation would bring them into strong linkage.

Policy recommendations for the future

Creating an environment for organic farming through appropriate policies, plans, and supportive services to increase the supply of safe foods for national and international markets is essential. For effective implementation of "Organic Farming Policy" the government of Sri Lanka should ensure an appropriate institutional mechanism with short-term and long-term actions, giving recognition and encouragement to the organic sector in the country; this will lead to overall development of the agriculture sector in Sri Lanka.

In order to achieve this target in the near future, the Sri Lanka Export Development Board (SLEDB) suggested recommendations to the Department of Agriculture for preparation of a National Organic Agriculture Policy in a bid to develop the organic agriculture sector in Sri Lanka. As part of SLEDB's dedicated programs for the development of organic agriculture sector in the near future, they have to prepare organic regulations for the Sri Lankan organic sector and create a national data base to identify farmers involved in the sector, existing and new processing methods, etc. They should also prepare an organic research institutional data base in collaboration with the Department of Agriculture, the Department of Export Agriculture, universities and research agencies. In addition, they should help growers obtain certifications for their organic products and conduct workshops to disseminate information on new technology for producing organic products that already face high market demand.

Identified policy arenas to be implemented in organic agriculture sector in Sri Lanka

Government plans on organic agriculture in Sri Lanka are not as strong as in other countries. The Sri Lankan government still does not have an explicit policy or strategy for the development of the organic agriculture sector where several government departments have a significant role to play (Agriculture, Health, Environment, Education, Tourism, Trade, Commerce and Finance). So, it needs to support the development of an organic agricultural policy that in turn contributes to wider government objectives. Thus, organic agricultural policies should be implemented in Sri Lanka covering all the areas such as production, handling and processing, certification, labeling and packing, selling and marketing, record keeping, extension, training, research and social justice as shown in Figure 1.

It is obvious that, if the government of Sri Lanka works to manage these important areas related to organic farming, gradual improvements can be seen in that sector. Therefore, at the Sri Lankan level, strategic focus for policy support for organic agriculture is needed. Also, present organic farming plans need to be revised in order to suit the present-day market scenario and thereby spread the benefits of organic farming to farmers, marketers as well as consumers.

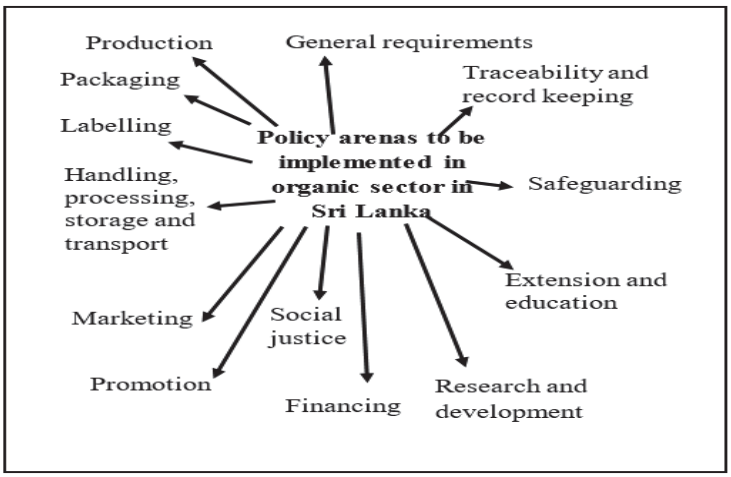

Fig. 1. Identified policy arenas of organic agriculture in Sri Lanka
Source: Authors' own creation.

Conclusion

Although Sri Lanka has a high potential for organic agriculture, it is still at the initial stage. However, gradual improvement can be seen. Educated and rich consumers pay close attention to their health. Producers are also concerned with the production of chemical-free food and drinks. Demand for organic food in export as well as domestic markets is increasing. In the meantime, the number of organic farmers is also gradually increasing. However, higher prices are acting as a barrier for buying organic products by most of the people.

Organic certification is taking place in Sri Lanka at two categories: certification for the international market and for the local market. Although there are seven international food certification agencies operating in the country as external inspection and certification bodies, a limited number of accredited certifications for the products exist for the domestic market. SLEDB is setting up an independent body to obtain the third country registration in Europe. This controlling authority governs the organic sector in the country and registering Sri Lanka on the third country list of the EU can reduce the cost of certification and facilitate organic products in penetrating the EU member markets. SLSI is a pioneering organization, with a certification body for domestic market. Moreover, a community-based organic certification system – PGS and Lanka Organic Agriculture Movement – are presenting certification services.

There are several problems regarding organic farming in the country. The main problems regarding cultivation activities are longer conversion periods from conventional farming to organic farming, effect of neighboring farmers who are doing conventional farming and high cost of production. Extension officers have also identified similar types of problems that are faced by the farmers related to organic farming. Although Sri Lanka still has not formulated a policy for organic farming separately, there are provisions to adopt technologies in farming that are environmentally friendly and harmless to people's health.

As a whole, the organic system in Sri Lanka is not well developed like in other leading countries such as the EU or USA. Organic systems in those countries are more integrated with national strategic plans and visions. Those governments are more involved in new initiatives and farmers are encouraged to go organic through reliable and feasible policies. Unfortunately, lack of these comprehensive strategies in Sri Lanka is a big obstacle to achieving relevant policy goals. As the supply chain between organic products and the processing industry in Sri Lanka is not well organized, a proper plan needs to be formulated by introducing refined agricultural technologies and innovations leading to a better situation.

It is very important to evaluate Strengths, Weaknesses, Opportunities and Threats (SWOT) related to organic agriculture in Sri Lanka. Key problems facing policy-makers are balancing of supply and demand initiatives and inability to identify the major problems of farmers when achieving sustainable development of organic agriculture. The gap between demand and supply still exists due to the paucity of effective and organize linkage between the producers and the marketers

The need for public-private collaboration to support the organic sector is underlined by different factors such as shared goals, respective assets and complementary roles and risk management in making organic policies. The private sector is able to find new solutions and innovations more quickly than government institutions. Since it can offer perspectives on the feasibility and impact of implementing government policies and programs in this sector, collaboration between the public and private sector is very important in this situation.

Policy instruments associated with organic agriculture in Sri Lanka are very fragmented. Integrating them in organic production, promotion and trading is crucial to achieving sustainable agriculture and higher economic growth. For such implementation, an effective linkage and coordination among government and private participants is needed. Explicit policies, norms and standards relevant to organic foods and clarity in enforcement of legislation would bring them into strong linkage. Creating an environment for organic farming through appropriate policies, plans, and supportive services to increase the supply of safe foods for national and international markets is essential.

Even though Sri Lanka should ensure an appropriate institutional mechanism with short-term and long-term actions giving recognition and encouragement to the organic sector, government plans for organic agriculture are not as strong as in other countries. The Sri Lankan still government does not have an explicit policy or strategy for the development of the organic agriculture sector. In this regard, several government departments have a significant role to play. Therefore, strategic focus for policy support for organic agriculture is needed. Also, present organic farming plans need to be revised in order to make policies related to the present-day context covering all areas related to production, handling, processing, certification, labeling and marketing thereby to spread the benefits of organic agriculture to farmers, marketers and consumers.

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