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## Pros and cons of organic farming

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### Abstract

After the green revolution world crop production increased dramatically at the same time world population also increase. The use of chemical fertilizer has increased food production but at a high price. Continues use of chemical fertilizers has degraded soil and water quality. As well as excessive use of pesticides and herbicides has also polluted our food. To overcome this situation people around the world are now shifting towards organic farming. But just like traditional farming methods Organic farming comes with challenges and opportunities. More lack of proper knowledge and insufficient training makes work more challenging. But with the proper training and excess to the market can solve many challenges. There is a huge market for organic certified products, especially in developed countries. In developing countries, organic farming can be a solution to increase their income as well as to retain their soil and water quality from degrading.

**Keywords:** Organic farming, small scale farm, sustainable growth

### Introduction

According to the latest data from the FAO (2019) about 690 million people around the world are hungry. Out of many one of the primary reasons may be due to high cost and low affordability which billions cannot eat nutritiously. During the COVID-19 pandemic, the whole world was under lockdown but it reversely affected the world in the fight against hunger. It is predicted that around 132 million to 83 million people may face food shortages. Most people are suffering from hunger in developing countries. It is estimated that 37 million from Latin America 526 million people are from Asia, and 227 million are from Africa, but the situation may be worst in sub-Saharan Africa. It may be possible that in recent times there may been some decline in numbers, especially in Latin America but still, there is a long way to eliminate hunger. With the increase in population, there is an increase in demand for food, feed, fuel and natural resource. But not only the growing population but the nature of consumption of food by peoples in developing countries have changed a lot they prefer highly finished food items and meat consumption become one of the most important food items on their list leaving a big negative footprint on a natural resource [28, 58]. It is estimated that by 2050 annually food demand will grow at a 1.1% rate [1].

From our past, we can conclude that Green Revolution had increased food production dreamily at a global level but it has been achieved at the cost of environmental degradation and natural resource. Resource [2, 55, 10]. Lack of land, water, resources, knowledge, and capital restricted food production in many regions around the world [55] Moreover it is observed that agricultural technology bypasses poor people due to improper land management and poor governmental laws [51]. A number of studies have proved that small- Scale farmers from developing countries are growing to play an important role in the food security of the world [2, 65, 6] although they are at the most insecure stage of food security [32] According to IFPRI Research on MENA, 2015 half of the people who are hunger belong from small farmer's category. To overcome this situation government has to pay special attention to small farmers in a developing country. When we refer to small-scale farmers we generally refer to different factors like a small area of the farm, less capital, number of fewer workers, etc. But out of all one common factor is small and fragmented land present all around the world although there is no proper definition for small land. But according to FAO guidelines, a person can be catheterized into a small farmer if he has less than 2 hectares of land.

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Today 11% of the world's land is used in agriculture and 70% of fresh water is utilized in irrigation according to FAO data. Moreover, agricultural land is unevenly disturbed between developed and developing countries. In developing countries especially in Africa due to improper knowledge and education farmers are focusing on the slash-and-burn method of farming which ultimately harms the environment. With the increase in population and an increase in demand for food farmers around the world usually go for monocropping systems which led to serious nutrient deficiency, soil degradation, and crop disease cycle. This degraded land force farmer to move to another land and convert that into agricultural land. According to FAO, the total amount of farming land had decreased worldwide from 0.38 ha in 1970 to 0.2 ha in 2013 and is expected to reach 0.15 ha by 2050. Many studies have been conducted that show that farming land, as well as freshwater supplies, are significantly reducing in developing countries. [68, 34, 36]. Suction can be worst in east southeast Asia, this is less than 0.10 ha by 2050 (Food security in Asia and Pacific 2013). Another major issue faced by farmers in developing world countries is climate change which has a negative impact on food production [51]. African countries will be most affected by climate change [20]. The prediction has been done that in coming years crop failure may occur [70]. Not only the fall of the crop but African countries have to face social, health and food shortage issues also [33]. Apart from this change in rainfall pattern may result in water shortage ultimately resulting in the loss of valuable fruit and nuts supply which was one of the main export of countries in the sub-Sahara region [48]. In many parts of the world water is the main issue to resist farming mainly in the Middle and near East and North Africa one of the driest regions in the world. It is assumed that the lack of water storage in North Africa will have a negative impact on food security [22; 34; 37]. However, studies show that famine and hunger are mostly common in sun- Saharan Africa where drought is common. Some more factors responsible for the hunger index are improper government policy, corruption, civil unrest and poor infrastructure. Just by good water management, we can achieve very good yield ultimately reducing hunger [14; 46]. To overcome this issue much research has been conducted to develop a reliable solution for low-input sustainable farming techniques to solve food security [57]. Some possible solution for this is a combination of ecological pest management, integrated farming system, and organic farming are some of the most important sustainable agriculture practice developed in the recent past year. In the semi-arid region, many researchers have suggested organic farming as an environmentally friendly method to produce agricultural products [7, 16]. Organic Farming includes many environmental benefits like better soil quality, high water holding capacity, biodiversity conservation, reduced water evaporation, reduced greenhouse effect and many more [59, 54]. According to (IFOAM) the International Federation of Organic Agriculture Movement Organic farming is based on four blocks ecology, fairness health and protection of ecology and human [55]. According to evidence east Africa can maintain food security throw organic farming [5, 68]. Especially for developing countries having small farm areas where traditional methods of farming are not able to solve food security problems [54]. In countries in Asia and Africa where almost 70% of the poor live investing and building better facilities for farming can improve the economical condition of people living in that area [48]. Moreover, by being certified by organic farming organizations farmers can take direct benefit from high-value chemical-free food products by selling [67, 55]. As focused by this paper organic farming come with challenges and benefits so we

will try to elaborate on the scope of Organic farming and to what extent it can be practiced and profitable by small farmers.

## Opportunities

### Environmental benefits

In many research, it is proved that people living in rural areas are most susceptible to environmental change as most of them are living in a delicate ecosystem and their livelihoods are very much dependent on natural resources. High dependency on natural resources for sustaining a sudden change in the environment can affect people's income and push people into poverty. [57, 19]. Today it has been proven that for sustainable growth Organic farming is the best methodology without damaging the ecosystem [58]. Some benefits of organic farming with respect to ecology are good soil health, less water pollution, high biodiversity and energy efficiency [60]. Nitrogen leaching and energy consumption per unit area are less in organic farming in comparison to traditional farming but the land area and eutrophication in water bodies are high per unit area [66].

Many farmers living on degraded land and having small land for cultivation are following unsustainable farming practices which ultimately degrade land quality. In organic farming systems, the soil has a critical role in production and can improve soil health [56, 35]. Soil management methods in organic farming have great potential to restore degraded land and prevent further degradation in susceptible region like Rajasthan and sub-Saharan Africa [58]. Some popular methods for soil conservation in organic farming can be less tillage, terraces, soil mulching, soil bunds and agroforestry [41]. It has been proven that organic matter and carbon content are much higher in organic farming in comparison to traditional farming [25]. Organic matter increases water percolation in soil, therefore, reducing soil erosion and spreading the soil food web and improving the nitrogen cycle within the soil thus reducing water supplies [50]. Oceania countries have perfume very well in organic farming they can be a role model for countries who want to improve their farming practice without harming nature with food security

**Table 1:** World: Organic agricultural land (including in-conversion areas) and regions' shares of the global organic agricultural land 2017

Region	Regions shares of the global organic agricultural land.	Organic agriculture land (Hectare)
Oceania	69,845,365	51%
Europe	14,558,246	21%
Latin America	8,000,888	11%
Asia	6,116,834	9%
North America	3,223,057	5%
Africa	2,056,571	3%
World	69,845,243	100%

**Source:** FiBL survey 2019. Note: Agricultural land includes in-conversion areas and excludes wild collection, aquaculture, forest, and non-agricultural grazing areas.

\*Includes correction value for French overseas departments.

### Health and Nutrition Benefits

As organic farming is based on local input and knowledge efficiently, it can improve food security [61]. As grown locally it will be easily accessed by the poor at a much cheaper rate [30]. It can be very effective especially in dry and semi-dry regions as it can hold water holding capacity and increase food productivity [38]. A study was conducted by UNEO-UNCTAD (2008) in 24 African countries over 114 organic projects to conclude the yield capacity of organic farming. Surprisingly average yield to the organic plot was 128% more than the conventional plot. Due to

less urbanization and the high price of fertilizers and pesticides in African countries, people use less fertilizer, especially farmers having small land so converting those land into organic land is easy in comparison to another heavily polluted land [67]. It also decreases food shortage in rural areas because food shortages in rural areas are due to crop failure due to monoculture and organic farming is a big supporter of the multicultural cropping system [57]. If we compare food safety parameter issues, then food and farm studies had proved that products grown by organic methods have the least trace amount of chemicals present in them [8]. Furthermore, the concentration of nitrate is very low in comparison to traditional food production [44, 71]. One of the biggest benefits of organic farming is the complete elimination of pesticides [58]. In studies, it has been noticed that 99% of pesticide fatalities in the world occur in developing countries with less knowledge of food safety and poor people with no proper use of chemicals [40]. New technology like metal analysis tests has proven that there is a significant difference in nutrient properties between organic and conventional grown food. Analyses report has also revealed that antioxidant level in organic food is higher at the same time conventionally grown food has a high amount of metals like lead and cadmium [9, 62]. Apart from this nutritional benefits production of organic products are still low which needs public and governmental support.

## Challenges

### Less production

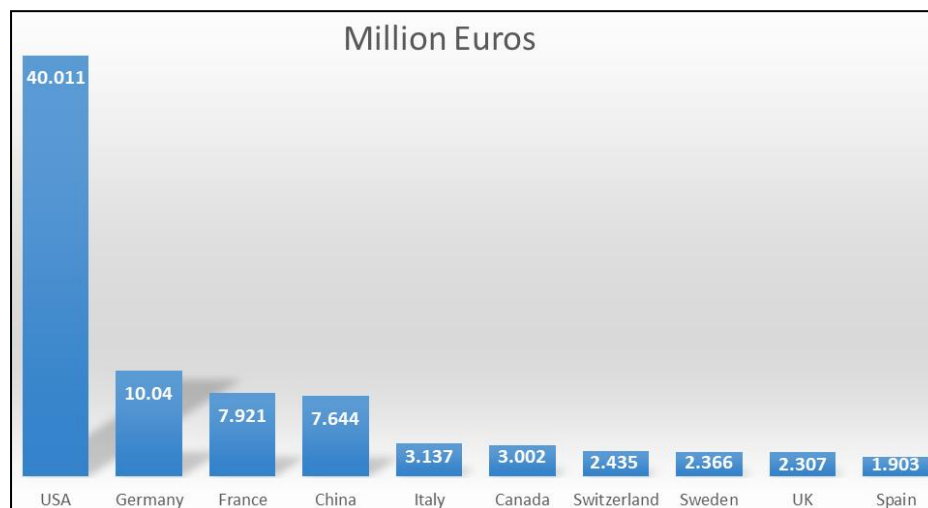
Inspired by several successful projects and role models people and governments around the world are worried about reduce in food production. It is estimated that approx. 40% of world food production may be affected ultimately resulting in 2.5 billion people in hungry and this could be the biggest famine in human history [42]. One of the possible reasons behind this theory is that Agricultural practices which were followed in 1900 were similar to methods followed in organic farming. Low input and less production can only feed 3 billion people. Currently, we have double the population that we were having in 1900 and our diet habits have also changed with high caloric intake [4]. Lack of proper training in soil practice and insufficient Knowledge about how to deal with pests and pathogens make organic farming a loss-making practice [42]. Moreover, some studies reveal that low production in the organic sector in developing countries is due to a lack of biofertilizers and biopesticides. Lack of good infrastructure in agriculture like channels for water, good water management, and electric connection in the farm also make farming difficult

Still there are some serious problems and challenges which need to be solved to obtain guaranteed good yield from this agriculture practice [11]. Concentrating chemical fertilizers and pesticides can't be used in organic farming so this method is not considered a solution. In spite of low-yield organic farming being an arguable issue rather than a universal phenomenon, there are thousands of literature proving it profitable.

Still, many food policy makers and scientists believe that the total food produced by organic methods is sufficient to feed the whole population [65, 7]. Low production in organic production is an important issue regarding the ability of organic farming to improve food security. Hence increasing food production is not a proper solution in fact there are many more issues political, economic and social [52, 69]. Good yield through organic farming is very much controversial because many studies have reported low yield [58, 52, 11, 4] on other hand many have reported high yield [67, 3, 70]. In a detailed review study, it has been reported that yield in tropical and sub-tropical countries mainly developed countries organic method of farming has resulted in 15% less production in comparison to conventional farming practice. But at the same time in developing countries or less developed countries, the organic method of farming resulted in more production [64]. It has been noted that production varies from place to place and crop to crop for example, in Mexico a small group of people have converted their coffee farm into organic and have gained a 15% high yield to 67% more yield in Guatemala. On other hand people who have converted their land into organic have faced a sharp fall in production up to 22% less yield in Costa Rica [44]. In the present situation, most of the organic products comes from traditional varieties and breeds which have less input requirement so we need to improve those traditional varieties [13]. Many studies reported that traditional farms when converted into organic farms have resulted in good production [3, 7].

### Certification and Market

There are two different types of organic farming. One is mainly in developed countries with certified products with a high price and another with non-certification mainly in developing countries sold in the local market at miserably low rates. It is generally observed that in developing countries organic products are mainly grown for export [55]. Certifying farm products are costly in developing countries because it needs infrastructure for maintenance and documents of production [28]. Moreover organic product certification has not much value for farmers because of the lack of a proper organic market [55].

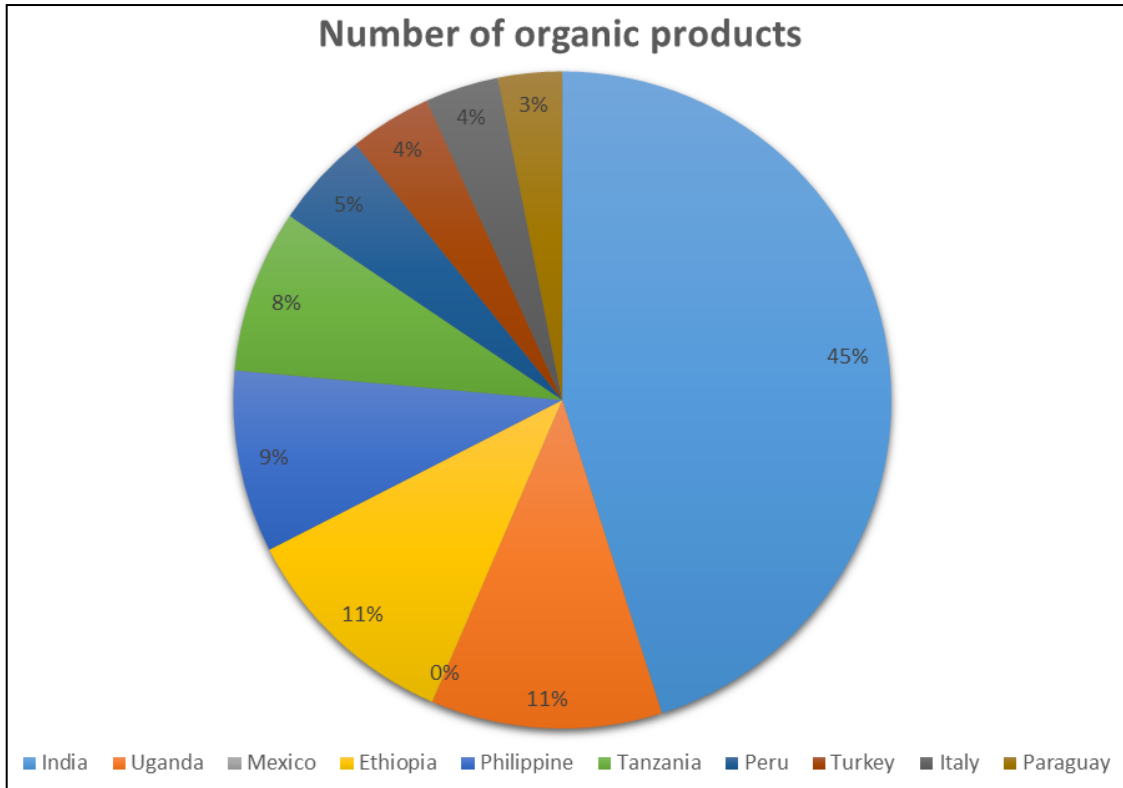


**Fig 1:** The ten countries with the largest markets for organic food 2017; Source: FiBL-AMI survey 2019

There are some cases in which it was absorbed that certificated products are less profitable than non-certificated products. For example, a study conducted on 327 Nicaraguans organic, fair trade and conventional coffee production over a decade reveals that even certificated coffee was expensive but due to less production in comparison to conventional the overall profit decreased. Organic certified coffee was sold at 8% to 11% higher in comparison to traditional coffee. Organic coffee was sold at 0.2 US\$ kg which was not sufficient to cover the extra money required for extra labor and land. Organic farming required the hiring of labor because a family member was

sufficient to do extra work [12]. In studies, it is observed that labor required

Organic products generally get 29 to 32% higher prices in comparison to the normal ounce as well as 7 to 13% more yield [18]. Case studies in Nicaragua have shown why Organically grown coffee was not profitable. But on the same hand, small-scale coffee plantations in Uganda which is a perfect example of Organic certificated farming can sell their products at prime prices. Fair pricing and trade practices need to be introduced to increase farmers' income by up to 30% [18].



Source: FiBL survey 2019

Fig 2: The ten countries with the largest numbers of organic producers in 2017

**Education and Research**

It is clear that Organic Farming is knowledge-based rather than input-intensive [26, 72] if is to be noted this method needs more knowledge and training [56]. Organic Farming mainly involves the use of indigenous knowledge and many believe that small-scale farmers in developing countries can easily learn the technique of farming because most of the methods are indigenous and do not need more training [42]. One of the major issues which the Organic research sector is facing is less investment in research and development. Organic farming

receives less funding than conventional farming for further research [52]. Moreover, small landholder farms are neglected in the field of research and policy-making. But it is equally important to involve these small farms in research and project [32]. New research has proven that investing in agroecological is a good idea as it has the potential to increase production throw systemic breeding, crop rotation and multi-cropping [42, 52]. There is a huge potential for growth in Organic farming securer only thing that should be kept in mind is to understand the need and market potential of countries.



**Table 2:** Organic agricultural land, the share of total agricultural land, number of producers, and retail sales by country 2017

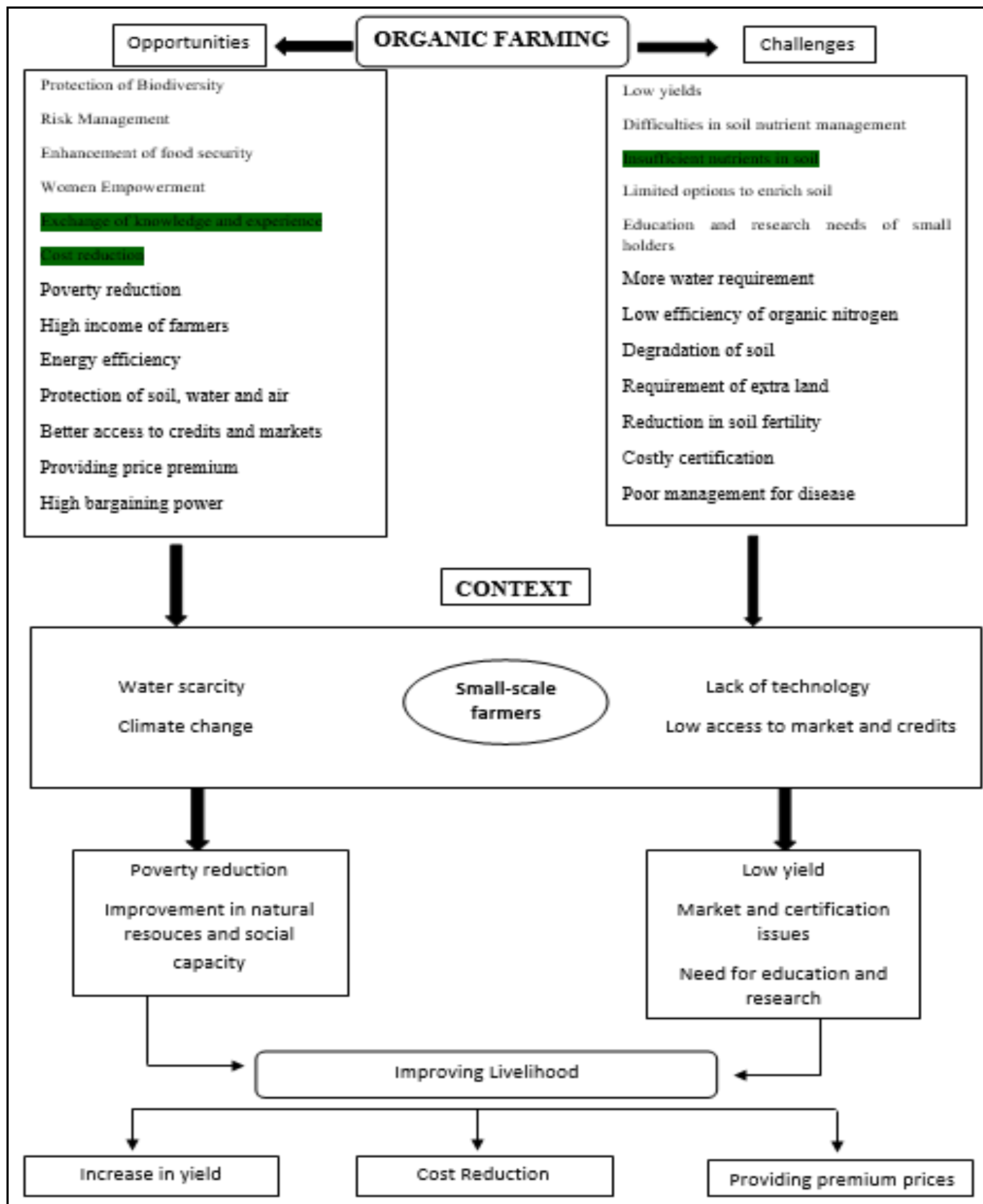
Country	Organic area [ha]	Organic share %	Organic product [no]	Organic retail sales[million euro]
Zimbabwe	3.246	0.02%	2,858.358	0.2 (2016)
Zambia	7.997	0.03%	10,061	
Viet Nam	58.018	0.5%	10,150	18 (2016)
Vanuatu	14.018	8.0%	3,804	
Uruguay	1.882.178	13.0%	5	
US Virgin Island	26	0.7%	1	
United States	2.031.318 (2016)	0.6%	14,217 (2016)	40,011
United Kingdom	497.742	2.9%	3,479	2,307
United Arab Emirates	4.687	1.2%	97	
Ukraine	289.000	0.7%	304	29
Uganda	262.282	1.8%	210,352	
Turkey	520.886	1.4%	75,067	46 (2014)
Tunisia	306,467	3.0%	7,236	
Tonga	1.588	4.8%	1,364	
Togo	39.390	1.0%	36,645	
Timor-Leste	31.278	8.2%	3	
Thailand	91.266	0.4%	38,120	12 (2014)
Tanzania	278.467	0.7%	148,610 (2013)	
Tajikistan (2012)	12.659	0.3%	10,486	
Taiwan (2015)	6.490	0.8%	2,598	
Syria	19.987	0.1%	2,458	
Switzerland	151.404	14.4%	6,638	2,435
Sweden	576.845	18.8%	5,801	2,366
Swaziland	186	0.02%	2	
Suriname	57	0.1%	1	
Sudan	130.000	0.2%	218	
Sri Lanka	165.553	6.0%	8,703	
Spain	2.082.173	8.9%	37,712	1,903
South Africa	41.377	0.04%	281	
Solomon Island	3.927	3.6%	1,213	
Slovenia	46.222	9.5%	3,627	49 (2013)
Slovakia	189,148	10.0%	439	4 (2010)
Sierra Leone	101,184	2.6%	1,846	
Serbia	13,423	0.4%	6,022	
Senegal	7,309	0.1%	18,913	
Saudi Arab	17,075	0.01%	145	
Sao Tome and Principe	8.780	18.0%	3,564	
Samoa	106.406	37.6%	2,053	
Rwanda	1.276	0.1%	9,002	
Russian Federation	656.933	0.3%	89	120 (2012)
Romania	258.471	2.0%	7,908	41 (2016)
France	1,051	2.1%	257	
Republic of Korea	20.700	1.2%	12,896 (2016)	330
Puerto Rico (2016)	14	0.01%	5	
Portugal	253.786	7.0%	4,674	21 (2011)
Poland	494.979	3.4%	20,257	235
Philippines	200.065	1.6%	166,001	
Peru	315.525	1.3%	87,460	14 (2010)
Paraguay	43.711	1.1%	12,749	
Papua New Guinea	13,675	1.1%	12,749	
Panama (2013)	15.183	0.7%	1,300	
Palestine	5.298	1.8%	1,449	
Pakistan	51.304	0.1%	25	
Oman	38 (2015)	0.003%	4 (2013)	
Norway	47.042	4.7%	2,070	419
Niue	165	3.3%	27	
Nigeria	53.402	0.1%	1,087 (2016)	

Niger	254	0.001%	2	
Nicaragua (2009)	33.621	0.7%	10,060	
New Zealand	88.871	0.8%	876	155
New Caledonia	94	0.1%	94	
Netherlands	56.203	3.0%	1,696	1,206
Nepal	9.361	0.2%	983	
Namibia	30.001	0.1%	23	
Myanmar	10.248	0.1%	16	
Mozambique	12.586	0.03%	8	
Morocco	9.175	0.03%	116	
Montenegro	2.715	1.2%	616	0.1 (2010)
Moldova (2016)	30.142	1.2%	114	
Mexico	673.968	0.6%	210,000	12 (2014)
Mayotte	41	0.3%	5	
Mauritius	14	0.02%	22 (2016)	
Martinique (France)	364	1.2%	55	
Malta	43	0.4%	13	
Mali	12,655	0.03%	12,272	
Malaysia (2013)	603	0.01%	119	
Malawi	12.232	0.2%	6	
Madagascar	63.954	0.2%	21,935	
Macedonia FYROM	2.900	0.2%	650	
Luxembourg	5.444	4.2%	103	122
Lithuania	234,134	8.1%	2,478	51
Liechtenstein	1.389	37.9%	45	6
Lebanon	1.353	0.2%	107	
Latvia	268.870	14.8%	4,178	51
Lao P:D:R	7.668 (2016)	0.3%	1,342 (2011)	
Kyrgyzstan	19.327	0.2%	1,097	
Kuwait	20	0.01%	2	
Kosovo (2015)	160	0.04%	100	
Kiribati	1.600	4.7%	900	
Kenya	172.225	0.6%	44,966	3 (2016)
Kazakhstan	277.145	0.1%	61	
Jordan	1.446	0.1%	23	
Japan	9.956 (2016)	0.2%	2,130 (2012)	1,409
Jamaica (2016)	374	0.1%	127	1
Italy	1,908.653	15.4%	66,773	3,137
Israel (2015)	5.785	1.1%	3030	
Ireland	74.336	1.5%	1,725	206
Iraq	60	0.001%		
Iran	11.916	0.03%	3,879	
Indonesia	208.042	0.4%	17,948	
India	1,780.000	1.0%	835,000	186
Iceland	20.177	1.1%	33	
Hungary	199.684	4.3%	3,642	30 (2015)
Honduras	29.274	0.9%	6,023	
Haiti	5.586	0.3%	2,245	
Guinea-Bissau	835	0.1%	1	
Guinea	10	0.0001%	1	
Guatemala	13.380 (2011)	0.4%	3,008 (2010)	
Guadeloupe (France)	200	0.4%	49	
Grenada (2010)	85	1.1%	3	
Greece	410.140	5.0%	20,197	66
Ghana	15,323	0.1%	3,164	
Germany	1,373.157	8.2%	29,764	10,040
Georgia (2015)	1.452	0.1%	1,075	
Gambia	20	0.003%	1	
French Polynesia	1,491	3.3%	25	

French Guiana (France)	3.061	10.0%	66	
France	1.744.420	6.3%	36.691	7,921
Finland	259.451	11.4%	4,665	309
Fiji	16.604	3.9%	1,627	
Faroe Island	253	8.4%	1	
Falkland Island (Malvinas)	31.937	2.9%	4	
Ethiopia (2015)	186.155	0.5%	203,602	13
Estonia	196.441	20.5%	1.888	42
El Salvador	1,677	0.1%	383	
Egypt	105.908	2.8%	970	
Ecuador	41.793	0.7%	12,483 (2016)	
Dominican Republic (2016)	205.258	8.7%	29,311	
Dominica (2011)	240	1.0%		
Denmark	226.307	8.6%	3,637	1,601
Czech Republic	520.032	12.2%	5.275	94 (2016)
Cyprus	5.616	5.1%	1,175	2 (2016)
Cuba	6.186	0.1%	509	
Croatia	96,618	6.1%	4,023	99 (2014)
Cote d'Ivoire	50.446	0.2%	2,777	
Costa Rica	8.736	0.5%	50	1 (2008)
Cook Island	25	1.7%	20	
Congo D.R	60.624	0.2%	42,323	
Comoros	1.445	1.1%	1,540 (2015)	
Colombia	31.621 (2014)	0.1%	4,775(2011)	
China	3.023.000	0.6%	6,308 (2016)	7,644
Chile	19.415	0.1%	446 (2013)	2 (2009)
Channel Islands (2016)	180	1.9%		
Cape Verde	495	0.6%	1	
Canada	1,191,739	1.8%	4,800	3,002
Cameroon	1.089	0.01%	449	
Cambodia	11.042	0.2%	6,760	
Burundi	83	0.004%	35 (2015)	
Burkina Faso	58.891	0.5%	26,626	
Bulgaria	136.629	2.9%	6,471	29
Brazil	1.136.857	0.4%	15.030	778 (2016)
Bosnia and Herzegovina	1.273	0.1%	304	0.4
Bolivia (2014)	114,306	0.3%	12,114	
Bhutan	6.632	1.3%	4,295	
Benin	18.928	0.5%	4,030 (2016)	
Belize (2016)	380	0.2%	820	0.1
Belgium	83.510	6.4%	2,105	632
Bangladesh	8.056	0.1%	9,337	
Bahamas	49	0.3%	1	
Azerbaijan 92015)	37.630	0.8%	305	3
Austria	620.764	24.0%	24.998	1,723
Australia	35.645.038	8.8%	1.998	1.138
Armenia	1.430	0.1%	36	
Argentina	3.385.827	2.3%	1.157	
Andorra	2	0.01%	1	
Algeria	772	0.002%	64 (2016)	
Albania	549	0.05%	61 (2014)	
Afghanistan	272	0.001%	2	
World	69.845.243	1.4%	2.858.358	92,074

**Source:** FiBL survey 2019, based on data from governments, the private sector, and certifiers. For retail sales data: FiBLAMI- survey 2019, based on data from government bodies, the private sector, and market research companies.

\*Total number includes data for countries with less than three operators.



**Discussion and Conclusion**

Today one of the biggest challenges in form of mankind is to feed a growing population worldwide [31]. This is highly useful in areas like Sub-Saharan Africa, where most of the population lives in rural areas and is highly dependent on agriculture for their livelihood. So it is important to encourage small-land farming and to make policies that can favor it [37]. Worldwide policy makers have different options to improve the economic condition of small land farmers but each of them has its

advantage and disadvantage [5]. In this paper, we have discussed all possible nutrient, environmental, and social benefits of organic farming. We have also discussed all possible challenges and food security issues, especially in developing countries. To compile all the possible outcomes, it is easy to disked whether weather to a small-scale farmer should o for organic or not. In many areas of the world, it is not possible to cultivate food due to a lack of proper water facilities, land and capital.



Moreover, due to unfavorable conditions for local small farmers Organic farming become challenging so they generally prefer an unsustainable farming system which ultimately harms the environment. Organic farming with an important technology focus on indigenous and local information can improve the social and economic conditions and slowly will improve the quality and quantity of natural resources.

With so many benefits Organic farming comes with some serious issues for farmers like slow increase in production, management, certification of production by organic certification origination, lack of knowledge and most important excess to market. Some dry fruits and nuts in water scarce places like Afghanistan and the sub-Sahara region performed better in Organic farms in comparison to conventional farms <sup>[64, 38]</sup>. Due to climate change concept of Organic farming is catching roots in the general public <sup>[56, 44]</sup>. According to studies Organic farming has performed better than traditional farming in extrema climates like drought <sup>[55]</sup>. After calculating all possible challenges and benefits we can say that farmers with small land holdings have a good opportunity to convert their land into organic for better production and sustainability. Different studies reveal that in developing countries due to a lack of resources small farmers have converted to organic and got better results <sup>[64, 23, 67, 27]</sup>. At last but not least certification of organic products can help small farmers to excess markets and sell their products at a reasonable price. On the other hand, some critics say the certification of organic products is excelling for big farmers or some well-organized small farmers rest a large share of profit is gained by middle man and traders <sup>[2]</sup>. In order to promote small farmers and facility them to organic market and certification IFOAM help them through group certification via the ICS Internal Control System and Participate Guarantee System (PGS) which are mainly based on the exchange of knowledge and trust. Moreover, contract farming provides small farmers the opportunity to excess market <sup>[43]</sup>. For example, based on export-oriented contract farming of rice in Cambodia had increased profit for farmers this can be an effective way to reduce the poverty of small farmers in ruler areas and an effective way of sustainable farming <sup>[15]</sup>. However, many farmers living in remodel area has very little accuse to chemical fertilizers and their products are almost organic so for them switching to organic is comparable essay is the time taken is less hence they can be benefited from certification and excess to market <sup>[57]</sup> However there is some criticism of the current system of organic farming practice based on heavily dependent external output as well as the need of certification. Moreover, to sustain their organic farming small farmers are mainly dependent on the export market which they don't have direct excess leaving less profit in their hands <sup>[2]</sup>. It is observed that almost 90% of organic products are sold in the EU and US markets <sup>[71]</sup>. Organic certification can be useful for farmers in the developing world and can be profitable only when they can get some direct excess to the export market <sup>[13]</sup>.

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