Sustainability in organic farming: An exploration to Finnish farmers’ reasons for choosing organic production and their perception of sustainability

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**Title of thesis:**
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**Abstract:**
Increasing organic production and diversifying the organic product range is one of the primary development areas of the Finnish government. The national goal is to increase the organically farmed area of land to 20 % by the year 2020 (Nuutila et al, 2014). The organically farmed area and land under conversion in Finland grew by 30.8 % between the years 2012 and 2017 (Eurostat, 2017a). As organic production is increasing, so is the market demand for organic products and there is good potential in the organic food market in Finland. The aim of this research is to study why farmers in Finland choose organic production over conventional production and if sustainability affects their choice. This research also explores farmers’ perceptions on sustainability and how these perceptions are reflected in organic farming. This research contributes to the organizational view on organic farming and helps understand reasons behind business decisions. This is a qualitative, exploratory study with an inductive approach. Data was collected through semi-structured interviews with nine organic farmers in Southern Finland. The data was analysed using thematic narrative analysis. The results of this research were similar to those in previous research. Economic reasons, mainly the better profitability of organic farming, was the main motivation for choosing organic production. Other important reasons were avoiding chemicals, the sustainability of organic farming and ideological reasons, meaningfulness and better motivation. The farmers’ perception of sustainability develops and increases in importance with the adoption of organic production. The research also shows that the national policies for the economic support of organic agriculture are important for farmers and for conversion to organic production. Based on previous literature and the results of this research, a new conceptual framework for sustainability in organic agriculture was proposed; this framework includes the dimensions of economic, environmental, social and cultural sustainability that are all connected by the dimension of time.

**Keywords:** Organic production, organic farming, sustainability, sustainable development, inductive research, narrative analysis
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1 INTRODUCTION

In today’s environmental and social situation, pressure for companies to show responsibility and comply with environmentally sustainable production methods is rising. Especially farming has had an enormous impact on ecosystems related to land use and environmental concerns (Ramankutty et al., 2008). A global auto parts corporation called Magna International conducted an interesting experiment related to organic farming and decided to build a new town from scratch in Central Louisiana for the victims of hurricanes Katrina and Rita in 2005. It was an attempt of Magna International to display corporate responsibility and was funded from their annual goal to give two percent of profits to charity. The town, called Magnaville and later re-named by the residents as Canadaville, was supposed to be a self-sustaining organic farming community and offer housing for the victims that had lost their homes during the hurricanes.

Magna International’s representatives do not see the project as a failure, but critics claim it did not go according to plan. At its height, 200 people occupied Magnaville, but the result was that none of the evacuees actually became organic farmers which, according to critics, was due to them being used to city life and people cannot just transform from city dwellers into organic farmers. Equipment was left unused and animals became pets and the project came to a planned end in 2010, 5 years after it was initiated (Hildebrandt, 2010). Organic farming is something that requires skill and specific farming techniques in order to be successful. Also, one reason behind the Magnaville case not going exactly according to plan might be that the residents knew that it was a temporary situation and did not have the long-term commitment to it as their livelihood.

When a farmer chooses organic production as their livelihood, it demands a long-time commitment as the productivity of the land grows over time and farmers learn what methods work best for the soil that they farm – they also commit to following certain regulations related to organic farming and are subject to inspections by officials. This research aims to study why farmers in Finland choose organic production over conventional production and how the dimensions of sustainability affect their choice. There are several things that the farmer needs to consider when choosing organic production, such as crop yields and production efficiency as well as profitability. When before becoming an organic farmer could have been more of a philosophical and
lifestyle choice and farms were small, the growing demand of organic products has made organic food production a big industry and the sales of organic food has grown from 15.2 billion dollars in 1999 to 81.6 billion dollars worldwide in 2015 while that same year, the organically farmed area amounted to 50.9 million hectares (Statista, n.d.).

Organic farming can pose new business opportunities and, for example, in Finland the biggest obstacle for growth of the organic food market is that supply cannot meet demand (Nuutila et al., 2014). Even though there has been discussion about the lower crop yields in organic farming, the higher price of the final product in the organic market can still be a factor that helps make organic food production economically profitable for the organic farmer (Pimentel et al., 2005). For instance, according to the Rodale Institute, organic farmers can get up to three times the profit margins of conventional food production (Rodale Institute, 2014). Organic food production is also one of the fastest growing sectors of agriculture (Rodale Institute, 2014). Therefore, there is potential in the organic food market if farmers are ready to face the certain challenges of organic farming and base their farming techniques on scientific research.

Since chemical fertilizers and pesticides are not allowed in organic production, the biggest challenges are soil fertility and pest control (Pimentel et al., 2005), and this is something that may intimidate farmers from choosing organic production. However, these challenges can be faced and controlled and organic production can be made profitable if the farmer considers the soil material and its suitability for certain crops and adapts suitable farming techniques that have been proven to be efficient. The Rodale Institute has carried out rather extensive research on organic farming. Some farmers start out as organic farmers while others decide to convert from conventional to organic farming. In Finland, when you choose organic farming, the transition period for crops is three growing seasons while the transition period for meat and other animal products varies between products. The farmer also needs to participate on an organic farming course, and they are required to submit certain applications as well (MTK, 2012). During the transition period, farmers will most likely experience lower crop yields so it requires patience and the possibility to endure temporary lower profits. This is why in Finland farmers get subsidies also during the transition period (MTK, 2012).

The Rodale Institute (2014) refers to research done in the United States that identified some main obstacles to the adoption of organic farming, and these include
apprehension of more paperwork, lack of knowledge and expertise in organic farming systems, marketing, infrastructure and marketing economies as well as the higher managerial costs and risks in transitioning to a new way of farming. Even though farmers transitioning to organic farming do experience different challenges, the area of organically farmed land has grown quite significantly in Europe and in North America. Already in a study by Rigby and Cáceres in 2001, it was stated that organic agriculture was developing rapidly and in the United States, the number of organic farmers was increasing at a rate of 12 % per year and in the UK the area of organic and in-conversion land doubled between 1999 and 2000 (Rigby & Cáceres 2001). Later on, the trend became negative for UK (-15.6 % in organic area between 2012 and 2017) but the organically farmed area has grown in most other EU countries and the organic area, referring to organically farmed land as well as land under conversion, grew by 25 % between 2012 and 2017 (Eurostat, 2017a). For example, in Croatia the organic area grew by over 202.8 % and in Bulgaria by an incredible 249.1 %; in Finland, the corresponding number was 30.8 % (Eurostat, 2017a).

Organic production aims to be a more sustainable way of agriculture by preserving soil, water, energy and biological resources. Some organic farming technologies are likely to be beneficial even if adopted into the current conventional farming systems and can help improve the environmental and economic sustainability of agriculture (Pimentel et al., 2005). The benefits include using off-season cover crops, extended crop rotation and increased soil organic matter which results in the conservation of soil and water resources, reduction of insect, weed and disease problems and using natural biodiversity to eliminate or at least reduce the use of fertilizers and different pesticides. Sustainability is one of the key aspects of organic farming and in addition to the reasons behind choosing organic, this research aims to study how the concept of sustainability and its dimensions affects choosing organic production. The research shows that sustainability with all its dimensions is very much a part of organic production.

1.1 Research problem

In order to support the growth of organic production, it is necessary to study the motivations behind choosing organic production. This research aims to study why farmers in Finland choose organic production over conventional production and how the concept of sustainability affects their choice. This is a qualitative, exploratory study
that is specific to Finland because the reasons behind the choice of organic production have not been, to my knowledge, academically studied in Finland. Organic production is one of the primary development areas of the Finnish government (Nuutila et al., 2014) and the research aims to find ways in which this development can be supported. This research hopes to be able to contribute to this development by finding ways in which farmers can be supported in choosing organic production. This research will explore reasons for choosing organic production and these reasons can be used to encourage farmers to choose organic production or to convert from conventional farming to organic farming. This research will contribute to the organizational view on organic agriculture and help understand reasons behind business decisions, in this case the business of organic production.

The national objective for organic food and farming is to increase the organically farmed area from 9 % in 2013, when the objectives were set, to 20 % by 2020 and the development should be based on scientific research (Ministry of Agriculture and Forestry, 2014). Domestic production and consumption of food would have a positive impact on the economy of the country in question through creating work, promoting sustainable development and – following guidelines for corporate social responsibility in the company’s operations and the principles of organic farming – also be more environmentally friendly than transporting food products from the other side of the world or consuming non-organic food products. The goal is to replace the increasing import of food products with organic food produced in Finland (Nuutila et al., 2014).

The organic food chain involves parties, for example, in the primary production, processing and product development. Organic production and consumption is on the rise and new organic products are being developed all the time. The sales of organic products increased by 13 % in the year 2017 compared to the previous year (Pro Luomury, 2018). For example, Valio, a large Finnish dairy company, has invested in the development of organic products and now gets milk from 121 organic milk farms with ten more joining in 2017 (Liiten, 2017). The steady growth of the organically farmed area in Finland seems to continue, as the Finnish Food Authority reports that the organic or in-conversion area of land in Finland in 2018 was 13.1 %, increasing by 14 % compared to the previous year; and organic primary production makes up 10.6 % of primary production in Finland, growing by 10 % from the previous year (Finnish Food Authority, 2018).
1.2 Research questions

This is a qualitative study that will use semi-structured interviews to bring out the farmer's point of view and reasons for choosing organic production. In the end, the research is about why people choose certain work habits and will contribute to the organizational view on organic agriculture. It will not produce generalizable results but will produce patterns and themes as well as implications for further research. Qualitative research is important in order to understand the economic, political, environmental, personal and other factors that influence farmers in choosing organic farming. This research aims to explore and describe, to answer questions such as ‘how’ and ‘why’, which justifies the chosen qualitative approach. Qualitative research supports the aim of putting emphasis on the farmers’ view and gaining in-depth understanding of the research questions (Hennink et al., 2011).

This research will focus on the primary production in the organic food chain and will provide information that can be used to support the increase of the organically farmed area and the growth of organically produced meat and other produce in Finland. The aim of this research is to answer the following questions, specifically within the sustainability framework:

RQ1. What are the main reasons for choosing organic production in Finland?

RQ2. How do Finnish organic producers perceive sustainability and has it had an effect on their decision to choose organic production?

RQ3. How is sustainability incorporated in their business as organic producers?

RQ4. How do the national policies of sustainable development and organic farming affect their business and their decision to choose organic production?

Most of the farmers interviewed for this research already had experience in farming, but used to be conventional farmers and have later converted to organic farming. Even if the farmers started out as organic producers, they have still made the choice of organic production instead of conventional. Rigby and Cáceres (2001) refer to several studies where the reasons for converting from conventional to organic farming were discussed. It was argued that one of the reasons might be economical: the higher market price of organic products may be seen as a possibility to make higher profits.
This could especially tempt farmers in areas that are going through an agricultural crisis of some sort or farmers in areas that are difficult to farm or less profitable.

Research also suggests that the economic efficiency can be higher in organic farming systems compared to conventional farming systems (Vasile et al., 2015). It is important to keep the rural areas, where agriculture takes place, alive and provide an income for people inhabiting these areas. Organic farming can prove to be a profitable business venture for farmers struggling to survive in the competition of conventional farming. Even so, organic farming has also become a competitive industry but perhaps farmers can find opportunity, for example, in specializing in some areas of organic production. Previous research has also identified several other reasons, some dependent on the country or area and its situation, for choosing organic production. These will be discussed in more detail in chapter three of this thesis.

The profitability of organic production compared to conventional production and the sustainability of agricultural systems has been studied and discussed widely in recent decades. However, the perspective of the farmer and their perception of sustainability and organic farming has not often been in the centre of Finnish research. Reasons for converting to organic farming have been studied outside of Finland; for example, among Irish farmers (Wilier & Gillmore, 1992), in Denmark (Dubgaard & Sorensen, 1988), Sweden (Svensson, 1991; Kvist, 1994) as well as Germany (Bruckmeier et al., 1994) and India (Eyhorn, 2007). A closer look at these previous studies is provided in chapter 2.5. This research aims to fill the gap in the research in Finland and study the farmers’ choices from the farmers’ point of view.

The sustainability of organic farming is not as clear-cut as one might imagine and this will be discussed later on in this thesis. The general opinion seems to be that organic farming is or at least aims to be a more sustainable way of agriculture. Sustainability is something that is emphasized in many political schemes and in corporate discourse. The personal perception of individual farmers regarding sustainability and its effect on their decisions has not been studied as much. Sustainability can be difficult to measure and define. This research does not aim to measure the sustainability of organic farming but aims to gain knowledge about the farmers’ perceptions of sustainability and how it affects their decision-making process.

Even though the decision to choose organic farming can result in at least temporarily lower crop yields, advocates for organic farming emphasize the sustainability of organic
farming systems in the long run (Leifeld, 2012). The discussion around organic and conventional farming is that conventional farming has been able to feed a growing population of the planet but it is not sustainable as it results in environmental damage and degradation of ecosystems. On the other hand, the question is whether organic farming can be more profitable than conventional farming (Vasile et al., 2015). Based on previous research and this study, a proposition for a new framework of sustainability in organic production will be presented later on.

It seems that the profitability of organic farming can vary between countries and regions as well as based on the farmed crops or type of farming. It may even be that it is not possible to define the profitability of organic farming in general, but results of studies can be case-specific depending on country and region. For example, a study conducted among small-scale farmers in developing countries showed that the advantages of organic farming include for example an increased income and reduced external input cost as well as increased employment opportunities in addition to positive environmental impacts and improved food security (Jouzi et al., 2017). In India, converting to organic cotton farming had better economic viability and provided better security of livelihood (Eyhorn, 2007). In the Vasile et al. (2015) research, converting to organic farming was more economically profitable for farmers in Romania.

Previous studies indicate that financial reasons, such as the better profitability of organic farming and economic support for organic farmers, may be behind a large part of decisions to choose organic farming. This can indeed be seen as a major incentive for converting to organic farming. Economic reasons are naturally important in the conversion to organic farming, because the profitability of conventional farming in Finland has decreased in recent years, and farmers are looking for economical sustainability and better profitability in order to be able to continue farming in the first place. However, economic reasons alone might not be the best starting point, as organic farming requires strong commitment. Other studies identify very different reasons for conversion, such as environmental reasons, health concerns, food quality and previous bad experiences in conventional farming as well as ideological reasons. These are all reasons that were identified in the narratives of this research as well.

1.3 Limitations
This research is limited to organic farming and organic food production in Finland. Organic food production in this research is defined as any crops, vegetables, root vegetables, fruits, milk or meat that is meant for human consumption and that are produced organically, i.e. following the regulations and guidelines of organic production in the European Union, with the main differences to conventional production being that the use of chemical fertilizers or pesticides as well as GMO’s is prohibited, and animal welfare is more tightly regulated. The aim is to answer questions about “how” and “why”, which limits the amount of possible participants in the study due to time restrictions and the fact that the collection and analysis of qualitative data can be extremely time consuming. The research questions are studied through nine interviews with farmers that have made a choice to farm their land organically. In this research, the terms farming and agriculture as well as farmer and producer are used interchangeably.
2 THEORETICAL FRAMEWORK

Previous research has concentrated on the development of different theoretical models for achieving growth in the Finnish organic food market. The farmers’ opinions and subjective situations have not often been the focus of research in Finland. However, just as consumer preference studies concerning the consumption of organic products, it would also be important to study the farmers’ needs and how to support them in organic production. This research aims to concentrate on why farmers in Finland choose organic production over conventional production and how the concept and dimensions of sustainability affect their choice.

In Finland farmers essentially have two choices which are officially separate methods of farming and differ from each other in some significant ways: organic and conventional. In this section, we will start with definitions of sustainability and move on to sustainable agriculture and sustainability in organic farming. After this, we will compare organic and conventional farming and explore some previous studies on converting to organic farming.

2.1 Dimensions of sustainability

Sustainability was defined by the United Nations’ publication ‘Our Common Future’, sometimes called the Brundtland report, as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987). In 1994, John Elkington, a world renowned expert on sustainability and corporate responsibility, defined the term the "Triple Bottom Line" or TBL of sustainability (The Economist, 2009). The Triple Bottom Line consists of the three P’s, which are profit, people and planet, where ‘profit’ refers to economic sustainability; ‘people’ refers to social sustainability and ‘planet’ refers to environmental sustainability. Ecological or environmental sustainability means using renewable natural resources only within the limits of natural renewal and growth and all factors that affect the environment in a harmful way are avoided.

Seghezzo (2009) brings up other dimensions of sustainability and claims that the traditional aspects of sustainability (people, planet and profit) are not necessarily suitable for certain situations and proposed a new definition for sustainability combining the dimensions of ‘place’, including physical, geographical and cultural spaces, ‘permanence’, which refers to time and ‘persons’ which refers to a fifth, human
dimension of sustainability. The idea behind this five-dimensional framework of sustainability is that it would be more useful in outlining specific policies that support sustainable development.

Time has been mentioned many times in regards to sustainability and in the context of organic farming, especially in the notion of short-term sacrifices in order to reach long-term benefits – this is why, for organic farms in particular, the concept of time is an important one. According to Bansal and DesJardine (2014), sustainability is not all about environmental issues, the bottom line or corporate social responsibility and shared value; time must be considered together with sustainability and it manifests itself through organic farms having to make trade-offs in the present time in order to preserve equity for future generations.

Time is what separates sustainability and corporate social responsibility or CSR. Sustainability requires a much deeper understanding and resolving of underlying issues. It is about balancing the short-term and long-term supply and demand of resources which is what Bansal and DesJardine refer to when talking about time. Bansal and DesJardine agree with Barkemeyer et al. (2014) that businesses and strategic management are often very involved in short-term goals. To make long-term plans and to find them useful requires a high level of strategic planning. Bansal and DesJardine (2014) state that incorporating the concept of time into decision making could help bring sustainability to strategic management and organizational theories.

Combining culture and time into sustainability, Kohl (2016) states that adopting a sustainable strategy in business requires stakeholder engagement, using internal resources and engaging employees; it is about a culture of sustainability. Just as Bansal & DesJardine (2014), Kohl sees sustainability as being a matter of time and defines it as taking into consideration environmental, social and economic impacts of the organization’s actions both in the short and the long term. These impacts are similar to the previously mentioned Triple Bottom Line defined by Elkington. According to some studies, organic production demands a higher labour input which can contribute to creating more jobs in the community and co-operation between organic farms is common in order to obtain for example materials and tools needed in the production process, both of which contribute to social sustainability.

In addition to social sustainability, Axelsson et al. (2013) suggest that culture should also be recognized as a dimension of sustainability and that cultural values should be
considered in policies on economic use of natural resources. Many areas in which farming occurs, with their specific landscape, objects and structures, are an important part of the local culture. Cultural values are often associated with cultural heritage (Axelsson et al., 2013) and indeed, the interviews done for this research indicated that some organic farmers feel that it is important to maintain and protect the cultural value of the land that they are farming, including the landscape and for example old and culturally valuable buildings – taking the cultural dimension of sustainability in consideration.

Sustainable development traditionally revolves around the three dimensions of economic, social and environmental sustainability but there has also been a call for a fourth, cultural dimension of sustainability (United Cities and Local Governments, n.d.). According to the UCLG (‘United Cities and Local Governments’), in addition to economic, social and environmental challenges the world is also facing the challenge of preserving and promoting the continuity of local cultures. Even the word agriculture includes the word *culture*, and it is apparent that different areas have their own specific culture of farming and organic farming can also be seen as a form of culture.

![Figure 1](image-url)  
*Figure 1  The five dimensions of sustainability.*
2.2 Agriculture and sustainable development

Agriculture is taken into consideration in the United Nations Sustainable Development Goals or SDG’s. There are 17 SDG’s based on the 2030 Agenda for Sustainable Development that aims to “end all forms of poverty, fight inequalities and tackle climate change” (United Nations, 2015). The 2030 Agenda for Sustainable Development is a United Nations ’plan of action for people, planet and prosperity’ (United Nations, 2015) and the resemblance to the generally accepted 3 P’s or ‘Triple Bottom Line’ of sustainability, which are people, planet and profit (The Economist, 2009) is obvious. Prosperity, however, has a wider meaning in the Agenda than the profit of the 3 P’s. Prosperity is defined as including economic, social and technological progress in harmony with nature as well as prosperous and fulfilling lives for everyone. In addition to people, planet and prosperity, also peace and partnership are important aspects of the Agenda.

Farming is discussed especially in connection with Sustainable Development Goal number 2: “End hunger, achieve food security and improved nutrition and promote sustainable agriculture” and although the goal acknowledges the need to produce enough food efficiently to feed the growing population of the world, resilient agricultural systems and sustainable food production should help maintain ecosystems. SDG 2 also mentions that sustainable food production has the capacity to adapt to different circumstances such as extreme weather conditions and climate change or drought and flooding while improving the quality of soil (United Nations, n.d.). Organic farming protects soil moisture and water resources (Pimentel et al., 2005) and has a positive impact on the organic matter content of soil and to biodiversity (Mondelaers, 2009) which corresponds well to the Sustainable Development Goals.

The International Chamber of Commerce (ICC) has published a ‘Business Charter for Sustainable Development’ that addresses the issue of sustainability in eight guiding principles based on the UN Sustainable Development Goals. The Charter defines sustainability as comprised of economic, societal and environmental dimensions and therefore uses the same three dimensions as the Triple Bottom Line. The business charter was first published in 1991 and the last update was in 2015 (International Chamber of Commerce, n.d.). The principles of the Business Charter for Sustainable Development state that sustainable development should be a priority and in addition to the aspects of economic growth and development, environmental responsibility and management and responsibility towards people and societies, it also encourages
transparency as well as collaboration and partnerships that are critical for continuous development. The goals for sustainability should also be spread throughout the value-chain to relevant partners (International Chamber of Commerce, 2015) which puts some pressure on companies for responsibility for the procedures of their entire value-chain. The fact that organic producers can only acquire the material they need for production, for example seeds or feed for livestock, from sources that comply with the regulations of organic production, makes organic farmers take their supply chain in consideration in their production.

It should not be overlooked that an organic farm is not just an agricultural entity, but it is a business. It is not only environmental sustainability that is of central interest in organic production, but organic business also includes the dimensions of social and cultural sustainability (Nuuttila et al., 2014). The UN Global Compact defines principles of corporate sustainability and the social dimension of sustainability is of great importance. Social sustainability means taking into account how the actions of businesses affect people and the society in which it operates (United Nations Global Compact, n.d.).

Sustainable development cannot be achieved without actions from both public and private parties. Elkington identifies three waves that have pressured governments as well as corporations to take sustainability and corporate responsibility into account in their strategies (Elkington 2004). The first wave, that Elkington calls "Limits", started in the 1960’s and resulted in developments in environmental legislation in the OECD region. The second wave, 'Green', started in 1988 just after the publication of the 'Brundtland Report', that brought the term 'sustainable development' into the political discourse. The third wave, 'Globalization', started in 1999 and is in fact still the issue that we most often face in discussions about sustainability and corporate responsibility in the global context. In the end, according to Elkington, it is up to corporate governance to build sustainable capitalism. Sustainability will be a governance and a market challenge and he emphasizes that a comprehensive approach to sustainability requires the co-operation of a wide range of stakeholders across areas of government policy (Elkington, 2004). In order to promote and support organic farming and sustainable agriculture, sustainability and environmental responsibility need to be in the centre of political discourse and changes are needed in the political system to enable the growth of organic farming and the organic food market.
2.3 Sustainability and organic farming

In 2001 Rigby and Cáceres wrote an article about sustainable agriculture in relation to organic farming. Defining something as sustainable or not is extremely difficult as is the definition of whether the operations of an organic farming company are sustainable or not, since there are so many different factors affecting the outcome. One issue is that both the units of measurement and the scales of measurement differ both in and between the dimensions of sustainability. What may be considered as sustainable for one farmer at one time may not be that for another at another time, so defining sustainability varies depending on space and time (Rigby & Cáceres, 2001). It is therefore difficult to measure the sustainability of farming and also, the environmental impacts can only be evaluated after some time has passed. Indeed, it is probably not correct to conclude that organic farming is always sustainable or that sustainable agriculture and organic farming can be used synonymously. As per the definitions of sustainability addressed in this chapter, sustainability means more than just environmental sustainability or responsibility.

Sustainability in agriculture aims to combine the well-being of current and future generations and the principles of the sustainable use of natural resources (Rajala, 2006). The political environment in Finland has seen a shift towards favouring organic farming and adapting techniques used in organic farming to conventional farming. The environmental aspect of sustainability is of central interest in the context of this thesis, as the topic is sustainability and organic farming. The European Commission states that in organic farming, “biological and mechanical production processes and land-related production should be used to achieve sustainability” (European Commission, 2018a).

The General Assembly of the United Nations has published a sustainable development agenda (United Nations, 2015) that defines sustainable development through five main aspects, that include ending poverty, protecting the environment, prosperous life and progress in harmony with nature, peace and partnerships among all countries, stakeholders and people. Furthermore, the United Nations uses the triple bottom line definition of sustainability when defining sustainable development as having three levels, which are economic, social and environmental (United Nations, n.d.). The aim of organic farming is to produce food while minimizing any harm to ecosystems, animals or humans (Seufert et al., 2012). Previous studies show, that organic farming can be economically sustainable and profitable and is or aims to be environmentally
sustainable; environmental sustainability is of pivotal importance in organic agriculture. Organic farming can also positively contribute to social capacity (Jouzi et al., 2017), which means voluntarily formed relationships between people, or groups and organizations, in order to reach mutual benefit and develop a wider common goal as well as encourages co-operation and trust between the parties (Parker, 2010). Social capacity as a concept possesses many of the same principles as the United Nations Sustainable Development Goals, that also emphasize inclusiveness and openness.

There has been some discussion and research on whether organic is actually more sustainable and environmentally friendly than non-organic (Pacini et al. 2003; Trewavas, 2001; Pimentel et al., 2005). Miller (2014) claims that the goals of organic farming and sustainability are mere wishful thinking and questions the very founding principles of organic farming and why it is called “sustainable”. Reganold (2016) answers the claims of organic farming not being sustainable by presenting his research, where he with his co-writer studied 40 years of science and hundreds of scientific research papers and then compared sustainable and conventional farming using four main metrics of sustainability; the before mentioned environmental impact, economic viability and social wellbeing – adding a fourth metric of productivity. They came to the conclusion, that even though organic farming produces less and has been said to be more inefficient than conventional farming, it is more profitable and environmentally friendly. This will, in the long run, enable sustainable production of food so that there are still resources left for that production. Also, Reganold refers to the equal or better quality of food that is produced organically than that, which is produced with conventional methods, and the positive social impacts of organic farming. The Food and Agriculture Organization of the United Nations lists sustainability in the long run as one of the environmental benefits of organic farming (FAO, 2018).

Miller (2017) claims that organic farming may work well locally and on a small scale, but due to lower crop yields it is a mere waste of land and water and will not be able to produce the amount of food needed on a larger scale. In contrast, The Worldwatch Institute (2013) states in their report that organic farming is not only more environmentally sustainable, but can also promote food security as well as social sustainability by ensuring work and livelihood to people in rural areas. Also Reganold and Wachter (2016) are of the same opinion, stating that organic farming produces food products that contain less or no pesticide residues. Kilcher (2007) is on the same lines with the Worldwatch Institute and believes that organic farming can promote
sustainable development socially, economically and ecologically. He refers to poorer countries, which yields a thought: ‘organic’ farming, which is done in many poorer countries in rural areas but is not certified, can be something that enables smaller, local farmers to produce products for the market and contributes to sustainable development.

2.4 Organic farming vs. conventional farming

Organic agriculture is a holistic way of farming, where instead of chemical fertilizers and pesticides, farming is based on specific farming methods such as crop rotation, intercropping, organic manure as fertilizer and biological pest control and emphasizes a balanced agro-ecosystem (Eyhorn, 2007). Organic food production has some specific attributes that affect organic farming as a business compared to conventional farming, since it is more regulated and controlled than conventional, non-organic food production. The legislation of organic food production takes into account the living conditions of production animals as well as the use of chemicals. For example, production animals are required to have more spacious living conditions and access to outdoors and fresh air and for example synthetic pesticides and colourants, GMO's and radiation are prohibited (Nuutila, 2016).

Biello (2012) claims that conventional farming is one of the most serious threats to the environment and the natural resources that we depend on. Chemical fertilizers are the cause for most of the environmental impact when it comes to Earth’s atmosphere and the greenhouse effect (Sanders 2012; Mole 2014). In organic farming, chemical fertilizers are not used: only natural or biological fertilizers such as the manure of cattle, are permitted. This also helps with the disposal of manure, which is a problem for many cattle and horse owners, as they usually need to pay for a company for the collecting and disposal of manure. The use of chemical pesticides in conventional farming is also a cause for costs regarding environmental and health care, in USA about 12 billion dollars every year (Pimentel, 2005). Conventional farming can also contribute to the erosion of soil (Pimentel et al., 2005) and is therefore harmful to the environment in several different ways. One of the benefits of organic farming is that it protects the soil moisture and water resources and can therefore be a suitable farming method under drought conditions (Pimentel et al., 2005). Conventional farming could be made more sustainable by taking in use some of the traditional organic farming methods (Pimentel et al., 2005; Lorenz & Lal, 2016).
Pimentel et al. (2005) also refer to several studies where it has been shown that “sound management practices can reduce pesticide inputs while maintaining high crop yields and improving farm economics”. They also refer to a statement by the United States National Research Council’s Board on Agriculture and National Resources saying that government programmes in Sweden, Canada and Indonesia have shown that there could be a reduction of 50-65% in pesticide use without it affecting the high yield or quality of crops. In Finland, a study by Holopainen et al. (2004) showed that the yield of carrots fertilized by horse manure was 66% higher than the yield fertilized by artificial fertilizer and the results were similar with other crops as well. The use of manure as a fertilizer, which is often the case in organic farming as chemical fertilizers are not permitted, can also balance emissions from animals (Nuutila et al., 2014). In addition, medication in organic livestock farming is regulated and organic production is separately monitored (Nuutila et al., 2014).

The research conducted for this thesis supports the conclusions of previous research in the United States, where it was found that the benefits of organic farming according to farmers themselves include a higher level of satisfaction and a strong sense of community; while organic farmers also experienced greater concern than conventional farmers for an ethical way of living and felt a need to live in harmony with nature (Sullivan et al., 1996). Because of the specific farming techniques as well as skills and knowledge being of central importance in the success or failure of organic production, since chemical fertilizers or pesticides are not allowed, organic farmers may feel a higher appreciation and respect for nature and are in some ways forced to work together with nature instead of exploiting it. Many organic farmers talk about their land as if it was a living organism, using phrases such as ‘knowing the land’.

The opinion on whether for example animals in organic production really do have a higher quality of life, depend largely on the source. Kansan Uutiset (Purokuru, 2015) published an article with the headline “Organic does not guarantee the well-being of animals”, where veterinarian Laura Hänninen criticized the reproduction and insemination of cows and the early weaning of calves that is common also in organic production. Even so, Hänninen concluded that she uses organic products due to the lack of a better alternative. Stolze et al. (2000) found in their research that the welfare and health of production animals depended more on individual farms than on type of agriculture. In 2009 the Lisbon Treaty acknowledged the feelings of animals and that all EU countries have to take animal welfare into account in their policies (European
Commission, 2018b). Organic production has, in addition, some specific requirements for animal welfare regarding various aspects from robust, adaptable and disease-resistant breeds to living conditions with strict rules on the housing of animals, access to natural air and light as well as outdoors. Livestock feed must also be organic and may not contain any substances for artificially promoting growth, synthetic amino acids or GMOs (European Commission, 2018b).

Verhoog et al. (2007) refer to the concept ‘natural’ as being often used when organic stakeholders such as producers, traders and consumers, characterize organic agriculture. They describe three different approaches to organic agriculture: 1) the no-chemicals approach, where only natural substances are used; 2) the agro-ecological approach, where also the self-organization of living organisms is respected; and 3) the integrity approach, which also includes the normative element of naturalness (Verhoog et al., 2007). These are different types of styles of organic farming and demonstrate how differently the word organic can be defined.

2.4.1 The economics of organic farming

Organic farming has sometimes been criticized of smaller crop yields compared to conventional farming and claimed to be insufficient and economically unsustainable. Different studies come to different conclusions when it comes to crop yields, but the overall consensus is that organic farming often produces lower yields – however, the difference can be minimized when farming is done professionally and suitable techniques are used. Also, since consumers are willing to pay a higher price for organic products, this can help compensate for lower yields (European Commission, 2013).

Pimentel et al. (2005) analysed the results of several studies regarding the economics of organic and conventional farming. When it comes to crop yields, in some studies and with some crops, lower yields were found in organic farming, but they were often temporary and could be improved with organic farming technologies such as increasing the use of animal manure as fertilizer. With some crops, organic farming can produce much higher yields while with some crops the situation is reversed to the benefit of conventional farming. This suggests that farmers should take the type of crops they are farming in consideration when making a decision on whether to use conventional or organic methods. Crop yields and economics vary based on crops, regions and technologies when comparing organic and conventional farming, which is to be expected when taking into consideration the different attributes of crops, the different...
growing seasons and precipitation in different regions and the variety of technologies used.

Pimentel et al. (2005) also came to the conclusion, that organic farming requires more labour force than conventional farming, but since the need for labour was spread out through the growing season, whereas in conventional farming the labour need was concentrated on spring and fall, the result was that the hired labour costs per hectare were close to equal between the two systems of farming. The required labour input in organic farming varies between studies and for example this research by Pimentel et al. (2005) compared different studies that showed that organic farming requires an average of 15 % higher labour input than conventional farming but can vary between 7 % to 75 % so the results are not straightforward. In any case, most studies agree that organic farming requires a higher labour input which, if you look at the social side of it, is not necessarily a negative thing as we will discuss in more detail later on when evaluating the social sustainability of organic farming.

The overall profitability of farming in Finland has decreased (Luke, 2018c) and in fact, the profitability of organic farming has now increased past the profitability of conventional farming in Finland (Luke, 2017). The profitability of organic farming is positively affected by agricultural and organic production subsidies, higher prices of products, larger farm size and lower production costs, partly a result from savings in chemical fertilizers (Luke, 2017). Other studies also suggest that the economic efficiency of organic farming is better compared to conventional farming (Vasile et al., 2015) and that organic farming is more economically viable and offers a more secure livelihood to farmers (Eyhorn, 2007). However, just as in agriculture in general, farm size and cost-effectiveness influence the profitability of organic farms (Nieberg & Offermann, 2003).

2.4.2 The environmental impact of organic farming

The intergovernmental Panel on Climate Change, operating under the United Nations, reported in October 2018 that greenhouse gases in the atmosphere causing global warming have reached their new record and warned that climate-related risks will grow affecting all aspects of our lives such as health, economic growth, food security, food supply, human security and livelihoods (IPCC, 2018). Concerning the environmental impact of organic and conventional farming, for example Mondelaers et al. (2009) examined the impacts of organic and conventional farming systems in their meta-
analysis of literature based on soil quality, biodiversity, nitrate and phosphorous leaching and greenhouse gases. Selected environmental indicators have been developed and the progress of OECD countries regarding these environmental indicators has been assessed for years (OECD, 2015). Stolze et al. (2000) assessed the environmental impacts of organic farming in relation to OECD environmental indicator categories that affect organic farming.

Tuomisto et al. (2012) also carried out a meta-analysis of published studies concerning the environmental impact of organic farming and the result was similar to that of Mondelaers et al. The meta-analysis of published studies came to the conclusion that organic farming has a positive impact on the environment *per unit of area*; however, *per product unit* this might not necessarily be the case. In general, the environmental impact of organic farming is lower than that of conventional farming, but organic farming still has challenges in improving nutrient management and crop yields (Tuomisto et al., 2012).

**Soil.** In organic farming, since chemical fertilizers and pesticides are not permitted, the soil quality plays an important role in crop yields. Organic farming has been found to have a positive impact on soil organic matter (Stolze et al., 2000; Mondelaers et al., 2009). Organic farming also preserves soil fertility better than conventional farming and has high erosion control potential (Stolze et al., 2000). The crop rotation system in organic farming, where different crops are grown every growing season, helps maintain better soil health and balance of nutrients.

**Biodiversity.** Organic farming has traditionally been seen as having a positive impact on biodiversity; in fact, that is one of the key goals of organic farming. There are increasing threats to biodiversity (OECD, 2015) which makes it important to try to protect and support biodiversity. The scientific community is very concerned about the state of biodiversity in the world and many countries have reported declining numbers of e.g. insects and birds which was the starting point for the UN biodiversity conference in Egypt in November 2018, where 190 countries world-wide seek ways to halt the loss of biodiversity (Finnish Government, 2018). Just a few weeks earlier the Arctic Council meeting in Finland had discussed the same themes (Ministry for Foreign Affairs of Finland, 2018). Mondelaers et al. (2009) found that organic farming also has a positive impact on biodiversity due to organic farmers using a larger variety of different breeds as well as to natural biodiversity, i.e. wild life. Some researchers have questioned the effect of organic farming on biodiversity although admitting the positive impact of
organic agriculture on soil, air and water quality (Lorenz & Lal, 2016). Stolze et al. (2000) came to the conclusion that in general, organic farming has a positive impact on the diversity of flora and fauna and that organic farming also has potential for positive effects on the conservation of wildlife and landscape.

**Emissions and their effect on water resources and air.** Mondelaers et al. (2009) found that the impact on nitrate and phosphorous leaching and greenhouse gases in organic farming is not as clear; in principle organic systems do reach a better score in these when calculated per production area, but this positive impact is lessened by the lower land use efficiency of organic farming systems. The Stolze et al. (2000) study states that even though the nitrate leaching rate per hectare can be up to 57 % lower in organic systems compared to conventional farming, the leaching rate *per unit of output* was similar or even slightly higher in organic farming than in conventional farming. This could possibly be avoided with appropriate farming techniques and ploughing at the right time as well as with the selection of favourable crops – indeed, the problem has been recognized and can be dealt with and this will lead to better farm management practices and lower leaching (Stolze et al., 2000). The use of manure may result in increased nitrate leaching and pollution of water resources, but this effect is highly dependent on when the manure is applied into the soil (Eurostat, 2017b) – one more reason for appropriate farm management practices. In any case, organic farming does not pollute water with chemical fertilizers or pesticides and any possible detrimental effects on water resources are lower in organic agriculture than in conventional agriculture (Stolze et al., 2000).

Regarding carbon dioxide emissions, the situation is similar to nitrate leaching: per hectare, carbon dioxide emissions can be 40-60 % lower in organic agriculture than in conventional agriculture but again, emissions per unit can be higher in organic farming than in conventional farming (Stolze et al., 2000). Agriculture is responsible for 94 % of ammonia emissions in the EU-28 area (Eurostat, 2017b). Regarding emissions from ammonia and methane, the assumption that Stolze et al. (2000) presented was that the emissions are lower in organic agriculture, but since research is scarce, no definite conclusions can be made. However, the type of agricultural practice as well as livestock population is found to affect ammonia emissions (Eurostat, 2017b). Air contamination is lower in organic farming systems since synthetic pesticides are not allowed (Stolze et al., 2000).
2.4.3 Organic farming and social sustainability

Continuing to evaluate organic farming from the triple bottom line point of view, in addition to economic and environmental effects, organic farming also has a social impact. After the second world war, people have moved to cities in masses and there is real concern for the preservation of the Finnish countryside and the development of rural areas. Following the people, also services are moving to cities and together with the decreasing profitability of farming, which leads to less farms, less people and less life in the countryside, the concern is justified. However, organic farming has the possibility to affect social sustainability in a positive way.

Organic agriculture has been found to increase rural vitality (Lasley et al., 1993). As was mentioned before, organic farming generally requires a higher labour input, which naturally requires workforce to do the manual work needed on organic farms. This can positively affect rural employment and can even support smaller farms that might otherwise not survive in the competition. Through new employment opportunities and related services, organic farming can support local, rural economies (D'Amario et al., 2005). More labour, the need for local services and participation in civic institutions also lead to positive development in the social interaction and economy of local communities (MacRae et al., 2007).

Many organic farmers have to look for other ways to increase their income in addition to farming itself. Some have expanded to tourism, and offer guests the opportunity to spend time closer to nature in very different surroundings than most people are used to. Just as with organic food consumption, also on holidays many environmentally conscious travellers prefer environmentally friendly holidays, so-called ecological tourism (D'Amario et al., 2005). Tourism contributes to preserving the cultural heritage and local landscape of rural areas and brings more money to that area, enabling more jobs and a more vivid countryside. It has even been reported that in areas, that have large numbers of organic farms, tourism can increase, perhaps due to the public's positive view on organic farming compared to conventional farming (Jones, 2003).

2.4.4 Differences between organic and conventional farming

The main difference between conventional and organic farming are in farming methods and in legislation, as organic farming is strictly monitored and certified. In Finland,
The Finnish Organic Association first established a nationwide inspection system for organic production in 1986 (Heinonen, n.d.). Organic food production in the EU and in Finland is strictly regulated and defined in EU legislation and is now controlled by the Finnish Food Authority. As a result, Finnish organics have been found free of any contaminants year after year (Pro Luomu ry & Luke, 2017). The national union for organic farming and food production aims at supporting Finnish organic production, and they work actively towards amending the current legislation and regulations to support the sustainability of smaller organic farms in Finland (Finnish Organic Association, n.d.). There are yearly inspections to organic farms in order to ensure that criteria are met and that the high quality of organic production is maintained.

Even though the control is strict, on the other hand, organic farmers in EU countries receive subsidies that are an important part of their income (European Union, 2016). Organic farmers also receive support through different rural development measures. The European Commission (2013) sees subsidies as a key factor in a sustainable income for organic farmers. The type and composition of subsidies differ between EU countries and sectors. Organic farmers receive less direct payments but more agri-environment and animal welfare subsidies. One important area of subsidies is also the ‘Less Favoured Areas support’, which aims to sustain agriculture in areas where farming may be more difficult and less profitable (European Commission, 2013). The EU legislation for organic production obligates all EU member countries but different countries can also affect organic production through national taxation, legislation and policies on subsidies (Nuutila et al., 2014).

Regarding environmental impacts, a meta-analysis of previous research in Europe (Tuomisto et al., 2012) showed that the main differences between conventional and organic farming are found in soil organic matter content, the leaching of nitrogen, emissions of nitrous oxide per unit of area as well as energy and land use. Organic farming results in higher soil organic matter content and has lower energy requirements, but has higher nitrogen leaching and nitrous oxide emissions per product unit and also requires higher land use (Tuomisto et al., 2012).

Despite their differences, organic and conventional farming face many of the same problems, namely plant protection in the short-term and maintaining soil organic matter and fertility in the long-run (Zanoli & Micheloni, 1999). It is in the way these problems are tackled where the differences between these two production methods
becomes evident; in organic farming, crop rotation and mechanical cultivation are used, while conventional farming largely relies on chemicals.

In a study where the attitudes of conventional and organic farmers were compared, both conventional and organic farmers thought independence was the main benefit of farming and the lack of financial reward the main drawback of their chosen career (Sullivan et al., 1996). Studies from the late 1980’s and early 1990’s also found that conventional and organic farmers share similar production practice preferences such as choosing crop varieties that are pest and disease resistant (Buttel & Gillespie, 1988) and that both conventional and organic farmers had a negative economic outlook on organic farming (Beharrell & Crocket, 1992). The latter has changed at least in Finland based on this research and will be discussed in more detail in the analysis and discussion part.

2.5 Converting to organic farming

Converting to organic farming has not been extensively studied in Finland, but has been studied especially in developing countries and in countries, where the economic situation for farmers has not been good. This approach to the subject of converting to organic farming seems to imply that the conversion is often done out of a need to reach a sustainable livelihood. Previous research has found a range of motivations to convert to organic farming. Motivations differ somewhat between different studies with some suggesting that the main reasons may be economic. However, in the research by Kallas et al. (2009), conventional farmers that base their decisions on economic factors have a low probability of adopting organic farming. Kallas et al. (2009) divide the reasons for adopting organic farming into economic and non-economic factors. In any case, the conversion to organic farming is one that happens in a social, cultural and economic context (Gliessman & Rosemeyer, 2010), which should be taken into account when thinking of ways to encourage farmers to convert to organic farming and reach the goals of increasing the organically farmed area.

Eyhorn (2007) carried out extensive research on converting to organic cotton farming in India where he found that conventional farmers in the area showed little confidence in the future of farming and the main motivation for converting to organic farming was to secure the economic viability of their farms. Indeed, organic farming according to Eyhorn’s study (2007) has, in addition to economic viability, promising potential for the sustainable management of the production base and livelihood security. However,
the transition period has proved to be difficult for farmers because of lower crop yields causing economic difficulties (Eyhorn, 2007). Countries differ in whether they support farmers economically in the conversion period or not; EU member states and USA as well as a few developing countries do provide economic support for farmers converting to organic farming (FAO, 2018).

An early study at the end of the 1980’s among 81 % of organic farmers in Ireland found that ideological reasons were the main motivation of organic farmers (Wilier & Gillmore, 1992). Fairweather (1999) referred in his research about choosing between organic and conventional farming to several previous studies about the motivations to choose organic farming. These motivations include environmental motivations in Denmark (Dubgaard & Sorensen, 1988), concern for environmental degradation, food quality and farm profitability (Svensson, 1991) or monetary support for new organic farms (Kvist, 1994) in Sweden and economic incentives in Germany (Bruckmeier et al., 1994). In addition, many have reported health concerns (Lockeretz & Madden, 1987), healthy food (Milder et al., 1991) and bad experiences with agricultural chemicals (Hong, 1994) as reasons for converting to organic production.

As will be presented later on in the analysis and discussion, this research yields some support to the notion of so-called pioneer organic producers supporting the conversion of conventional farmers to organic farming. In this research, pioneer organic producers refers to those that are known and respected in the community, who have well-established farms and who have been successful in organic production. In the research by Risgaard et al. (2007) that studied the conversion to organic production in two different areas, ‘champion’ or ‘pioneer’ farmers were supported by committed agricultural advisors. In their research, there seems to be a correlation between support, pioneer organic farmers and co-operation and exchange of experience among organic farmers.

As organic farming requires specific skills and knowledge, and since this has often been seen as a bottleneck for conversion, the support of advisors and other organic farmers may prove significant in the conversion process. Indeed, easy access to information and local agricultural authorities may support the conversion to organic farming (Kallas et al., 2009). A network of organic farmers is important for production and marketing information and farmers also want to be a part of a formal or informal network of organic farmers (Wiegel, 2009).
3 PRODUCTION AND BACKGROUND CONCEPTS

As organic farmers are a part of the organic production chain, in this section we will go through an overview of organic production in Finland. To establish the societal framework in which organic farmers work, we will also take a look at the political environment surrounding organic production in Finland and what goals the Finnish government has for sustainable development.

3.1 Organic production in Finland

The sustainable development of the organic food market and also the environmental sustainability have not often been the main goal of research (Nuutila et al. 2014). There is an expected doubling in food demand in the coming decades, which poses huge pressure and challenges for sustainable development of food production and environmental issues (Tilman et al., 2002). By 2050, it is estimated that food production would have to increase by 70 % in order to feed the growing population of the planet (Connor & Minguez, 2012). Organic farming and procedures known from organic farming could help reduce the environmental impacts of the growing food production (Pietikäinen, 2016).

Organic production has grown in Finland over recent years and growth was especially rapid in 2011 and 2012, growing at a double-digit pace (Pöytäniemi, 2014). The steady growth of the organically farmed area in Finland seems to continue, as the Finnish Food Authority reports that the organic or in-conversion area of land in Finland in 2018 was 13,1 % - increasing by 14 % compared to the previous year; and organic primary production grew by 10 % from 2017 making up 10,6 % of primary production in Finland in 2018 (Finnish Food Authority, 2018). The organically farmed area in Finland grew by 30,8 % between the years 2012 and 2017 (Eurostat, 2017a). In the EU, there has been significant growth in organic production over the recent years, with the total organically farmed area has grown from 5.0 million hectares in 2002 to 11.1 million hectares in 2015 (European Commission, 2016). There is enormous potential in the organic food market. As the size of the organic food market grows, so does the entire industry of organic agriculture. This poses new business opportunities for organic farmers although the market is a competitive one. Bocken et al. (2014) emphasize corporate and business model innovation as a prerequisite for developing
business models that support social and environmental sustainability. Companies could gain competitive advantage through an innovative and sustainable business model.

![Figure 2](image_url)

**Figure 2** Total organic area (fully converted and under conversion), by country, 2012 and 2017 in hectares (Eurostat, 2017a)

### 3.1.1 National objectives for organic food and farming

The national objective for organic food and farming is to increase the organically farmed area from 9% in 2013, when the national objective was set, to 20% by 2020 and the development should be based on scientific research (Nuutila et al., 2014). In the EU, 7% of the utilized agricultural area was organically farmed in 2017 (Eurostat, 2017a). In addition, the Ministry of Agriculture and Forestry in Finland has set objectives to diversify the range of organic products to meet consumer demand, increase the amount of organic products used in, for example, school kitchens and catering companies, and to cover the national demand of organic food with Finnish organic products (Ministry of Agriculture and Forestry, 2014). Organic primary production is still smaller in Finland than crops, but both have been growing in recent years.
In addition to increasing the organically farmed area, the common goals for organic production are to increase the organic market and diversify the product range, increase organic food selection in public food services to 20% by the year 2020, improving the co-operation and trust between different actors in the organic food chain and to strengthen the position of organic food in sustainable food production and consumption (Pro Luomu ry, 2014). Nuutila & Kurppa (2017) propose that a comprehensive change in the Finnish food chain is needed in order to reach these goals. For example, in order for agriculture to be more environmentally friendly, new farming methods are needed and in order to limit the use of food additives, new processing methods are needed. The government needs to be involved as well, through legislation, taxation and information (Nuutila & Kurppa, 2017). Reganold and Wachter (2016) also recommend policy changes as well as legal and financial tools in order to encourage organic farming.

The development of increasing organic production on a national level has sparked research on organic production in Finland, such as the organic production research programmes started by MTT Agrifood Research Finland in the 1990’s and continued by the Finnish Organic Research Institute (Nuutila et al., 2014) and the Organic Industry Report published by Organic Food Finland in 2010 (Pöytäniemi, 2014). Organic production is one of the primary development areas of the Finnish government and research aims to find ways in which this development can be supported. The Finnish Organic Research Institute was established in 2013 (Heinonen, n.d.) and carries out research in several different fields such as organic primary production, organic production and the environment, organic foods as well as organic food and farming and the society (Finnish Organic Research Institute, n.d.). It also coordinated the Research Programme for Organic Food and Farming in Finland 2014-2018 that lists four main areas of business-oriented scientific organic research which are agricultural production, environment, food sciences and social and political sciences. The aim was to encourage organic research into a multi- and cross-disciplinary direction (Nuutila et al., 2014).

In a recent research about the development and opportunities of organic production in Finland, it was concluded that the national development project for organic production is significant in promoting organic production in Finland (Yli-Heikkilä, 2018). In this research, the national development project for organic farming in Finland did not appear to have a big impact in choosing organic production, except for when it comes to economic subsidies. One farmer specifically mentioned the European Union and how
farmers feel that the “bosses in Brussels” make up rules and regulations for organic farming without having any idea of what would actually be necessary or useful. Some regulations also do not fit the Finnish climate and Finnish farming at all.

Some farmers interviewed for this study expressed concern about how the government can afford the subsidies given out in organic farming and regardless of the government’s stated goals of increasing organic production in Finland, in November 2018 this fear came true as it was announced that new organic farming commitments cannot be made starting from spring of 2019. The Minister of Agriculture and Forestry Jari Leppä explained that all the funds reserved for organic farming had been used or allocated to farms already in organic farming up to the year 2020. In addition, other subsidies were being cut as well (Holmberg, 2018). Understandably, this caused uproar in different organizations and among farmers.

The current organic farming subsidy system is in effect until the end of 2020. Local Eastern and Central Finland organizations under the Central Union of Agricultural Producers and Forest Owners (MTK) demand that when planning the next 7-year term for the funding of organic agriculture that sufficient funding is available for organic farming subsidies, even if more farmers convert to organic farming – the financial development must make it possible to increase organic farming in Finland (Rieku, 2018a). The Finnish Organic Food Association and the Finnish Organic Association demand the government to change their policy regarding the funding of organic farming and state that if the growth of organic production is slowed down by restricting the organically farmed area, the growing demand for organic products will be met by imported organic food (Rieku, 2018b). The associations are disappointed in the news and expect a two- or three-year interruption in admitting new farms in organic farming (Rieku, 2018c).

3.1.2 The market for organic products

Consumers are willing to buy organic products and the sales of organic products in grocery stores increased by 13 % in 2017 compared to the previous year (Pro Luomu ry, 2018). The higher price of organic products and the bureaucracy around organic food production are seen as factors that prevent the growth of organic food production (Ristiluoma, 2015), even though the higher market price of organic products can help compensate for the often lower crop yields in organic farming. On the other hand, the certification and verification of organic food production by independent parties makes
it possible for consumers to choose products based on their production method and provides them with assurance on how their food is produced. The most important reasons for buying organic food are the freshness of products, good taste and that organic food is ecological, environmentally friendly and healthy (Pro Luomu, 2017) even though the effect of organic food on health is not clear (Jensen et al., 2013).

A 2018 research by the Central Union of Agricultural Producers and Forest Owners (MTK) in Finland found that a clean, healthy and vital environment is the intent of farmers and forest owners as well as the source of consumers’ trust (MTK, 2018). The research studied the opinions of both producers and consumers. It showed that 86% of consumers trust that Finnish food is clean and safe. Farmers believe that they are farming in an environmentally sustainable way and their farming is continuously developed in taking environmental concerns in consideration. Especially protecting water resources, fostering the productivity and cleanliness of the land and securing biodiversity are seen as important (MTK, 2018).

The Finnish Organic Food Association and the Finnish Organic Association estimate that the sales of organic food in Finland could be doubled or tripled in the next few years (Rieku, 2018b). In the EU, the developed market economy, higher living standards as well as efforts by the commercial sector have resulted in the emergence of an environmentally-conscious consumer segment that is willing to pay for organic quality (Szente et al., 2003). In a study regarding the consumption of organic tomatoes in Israel by Becker et al. (2105) it was found that price and taste were secondary factors in the decision to consume organic food and influenced how much organic food consumer purchase, while the primary factor that influenced the decision of whether to buy organic or not in the first place, was environmental concerns.

International markets would hold enormous potential for the export of Finnish organic products. The consumption of organic food produce is higher in other Nordic countries, for example in Denmark the market share for organic products is almost 10% and in Sweden 7%, while in Finland the share is only 2% (Liiten, 2017). According to Pöytäniemi (2013) there would be good market potential on the Russian organic food market in addition to the current largest export countries Denmark, Sweden, Germany and France. North America and the Far East also offer interesting opportunities for clean and safe Finnish organic food products. Other countries have already found the potential for organic food export; for example, the report by the Worldwatch Institute
(2013) shows that the export of organic produce from India grew by 20 percent between 2009 and 2010.

Organic produce could become an export product of some developing countries and organic farming could increase the sustainability of certain local areas, also in Finland. In fact, the majority of Finnish oat products are exported and there is interest towards the growing export markets of Asia and the middle East (Pro Luomu ry & Luke – Natural Resources Institute Finland, 2017). In 2018 the value of exported organic products was estimated to be 25-30 million euros, which is only 2 % of Finnish food export (Pro Luomu ry, 2019). It has been evaluated that the export of Finnish organic food products could reach 100 million euros in the light of market potential, but this would require consistent promotion of organic production and export from the public sector as well as strategic choices on a corporate level (Pöytäniemi, 2013). What should also be noted, is that for example Finland holds the largest share of wild berries and others belonging to the wild collection and non-agricultural areas in the world, 12.2 million hectares while the second largest is in Zambia with 6.6 million hectares (FiBL 2017).

3.2 Problems in increasing the growth of organic food production

Pro Luomu ry, a registered association for different actors in the organic market in Finland, has published an action plan in 2012 for promoting organic food production and updated the plan in 2014. According to their research, there are some specific bottlenecks hindering the growth of organic food production in Finland (Pro Luomu ry, 2014). The first is the balance between supply and demand. With organic farming, food production is slower than with conventional farming and the availability of raw materials might not be stable, therefore production might not be able to answer the demand even if marketing would create that demand. Smaller production amounts increase the final price of products and the limited market for organic products does not encourage product development.

The second bottleneck is the bureaucracy and regulations of organic farming. Different regulations and statutes can cause confusion and misunderstandings that can even result in financial losses. Bureaucracy and repetitive inspections can be a burden for farmers and the fear of bureaucracy and sanctions can prevent and slow down the conversion to organic farming. The third bottleneck identified by Pro Luomu ry is “knowledge, will and skill”. Converting to organic farming inevitably requires learning
new techniques as well as how to operate within the frames set by the specific regulations for organic farming while still maintaining an economically sustainable business. There are still gaps in knowledge and skill transfer to farmers converting to organic farming (Pro Luomu ry, 2014).

The fourth and last identified bottleneck is the consumer experience of the price/quality relationship of organic products. For consumers, the higher price of organic products is what prevents them from buying organic. Many organic products are priced higher than the equivalent non-organic product and consumers simply cannot find a good enough reason to buy organic. The research by Pro Luomu ry suggests several different solutions for these bottlenecks, including networking of actors in the organic food chain, export strategy, education of farmers, research, statistics, communication and co-operation between farmers and authorities and the marketing and branding of organic products as well as the guidance and education of consumers about organic products (Pro Luomu ry, 2014). In this research, interviews with farmers will help reveal if and how these bottlenecks have impacted their decisions choose organic farming.
4 METHODOLOGY

This chapter will start by introducing the research approach and philosophy of this study. After that, research method, participant selection and data collection will be explained. The results of the study will be presented in chapter 5: Results and further discussed in chapter 6: Analysis and discussion.

4.1 Research design

If we look at the general plan of this research, it is a study that explores Finnish farmers’ reasons for choosing organic production and how certain things affect their choice. Exploratory studies can be valuable in finding out more and gaining a deeper understanding of a topic of interest, with in-depth interviews being a method of exploratory research (Saunders et al., 2016). Exploratory studies have especially been done in social sciences and when studying human behaviour, which is essentially the core of this study as well: exploring reasons for people choosing or changing to a certain lifestyle and source of livelihood.

On the other hand, this research also possesses an explanatory nature: the aim is to find out why farmers choose organic production and how certain variables affect their decision – this will explain the farmers’ choices. Explanatory research is done to identify relationships between variables (Saunders et al., 2016). Therefore, this research is designed so that it is possible to gather data that will contribute to both exploratory and explanatory purposes.

4.1.1 Research philosophy

This study adopts an interpretivist research philosophy. The reasoning behind this is, that the aim of this research is to create a deeper understanding about the reasons behind choosing organic production through in-depth interviews. An interpretivist philosophy strives to find what is meaningful to the research participants and in this research, specifically a phenomenologist approach to interpretivism is used since the focus is on the participants’ past choices and their interpretations of them (Saunders et al., 2015). The positivist approach has been traditionally more used in organizational research, but the interpretive approach has become a legitimate alternative (Lee, 1991) and this study aims to contribute to the organizational view of organic farming.
An important part of the interpretivist research philosophy is that the researcher should try to understand the world of the research participants from their point of view (Saunders et al., 2015) and in this research, the author herself is from a family of organic farmers and therefore has the ability to understand what life is like for farmers and can adopt an empathetic stance. According to interpretivist philosophy, people are influenced by how they perceive the world around them – their 'subjective reality' (Willis, 2007). This also means, that there is no denying the subjectivity of the researcher and the research as a whole, since it is about individual human lives and life choices. Subjectivity, as well as the influence of the researcher's own values and beliefs in the analysis and interpretation of results, are a part of the interpretivist research philosophy (Saunders et al., 2015). Even so, the analysis of the results in this research strives to be as unbiased as possible and scientifically appropriate.

Dr. Frances Harris of the Department of Biological and Environmental Sciences at the University of Hertfordshire held a presentation on using qualitative methods in farmer-participatory research where she encouraged a relaxed, informal and equal relationship between the researcher and the participant (Harris, n.d.). This was achieved in the interviews for this research. The interview questions were open-ended and the interviews were of a conversational nature. The interviewer also shared some life experiences regarding organic farming, where appropriate, to encourage the interviewee and to develop rapport. In-depth interviews allow for interviewees to explain and elaborate on their answers which is important for the interpretivist philosophy (Saunders et al., 2016).

Culture and history are important for interpretivist research (Crotty, 1998) and the decision to choose organic production was discussed during the interviews in the framework of the local culture and the history of the farm as well as family history, since a majority of farmers come from a family where several previous generations have been farmers. The family history can have an important impact in a farmer's choice to continue on the path of his or her forefathers. Some may have seen the disadvantages of conventional farming first hand, which has affected their decision to choose organic production.

David (1998) emphasizes a participatory approach and relying on farmers’ needs and developing dialogue. This research explores reasons behind farmers’ decisions and within an interpretive paradigm focuses on the subjective perspective of the farmer himself. It may not produce generalizable results but will produce patterns and themes
as well as implications for further research. Several researchers have called for studies that emphasize the farmers’ opinions, needs and point of view regarding the choice of organic production. This research focuses on the farmers’ views.

### 4.1.2 Research approach

The aim of this research is to study why farmers in Finland choose organic production and how the dimensions of sustainability affect their choice, as well as how sustainability is incorporated in their work as farmers, studied in the social, cultural and political framework in which organic farmers in Finland operate. There is a path of development for the perception of sustainability from before organic production to after the farmers have adopted organic production, which is identified and analysed in this research. This study is specific to Finland. This research wants to study farmers’ subjective reasons for their choice of organic production and gain a deeper understanding of factors that affect their decision-making process. Based on this research, a theory of what the main reasons are behind choosing organic production is formed. The results can yield possible ways to encourage others to consider organic farming.

A review of previous literature and the analysis of the results of this research has been used as a basis for developing a proposition of a new conceptual framework of sustainability in organic production. This study uses an inductive research approach by first collecting data to explore the reasons behind choosing organic production in the form on interviews. An inductive research approach is most often used in qualitative research and instead on testing hypotheses, will narrow the scope of the research by formulating research questions (Gabriel, 2013). The interviews will be analysed so that themes regarding the research questions can be identified. Based on these themes and the results of the analysis of interviews, the main reasons for choosing organic production and how farmers perceive sustainability can be formulated into a theory. The aim of an inductive approach is to explore phenomena, identify themes and patterns and based on these formulate new theory (Saunders et al., 2015).

The main aim of this research is to explore Finnish farmers’ reasons for choosing organic production, from the point of view of sustainability and sustainable development. This is why the research questions are formulated in a way where it’s possible to identify the reasons for choosing organic production and then explore how sustainability affects the farmers’ decision-making process and how their perception of
sustainability has developed and whether it plays a role in their organic production. Because these narratives cannot be taken out of context, the political, social and cultural context are also taken into account in the research questions.

As will be explained in the next chapter, this research aims to find meaning in people’s interpretations of the world in which they live in and a deeper understanding of reasons leading to certain choices. This aim and the research design supports the choice of an inductive approach as it allows taking context in consideration, understanding of phenomena, interviews using open questions and the appropriateness of a smaller sample size (Saunders et al., 2015). An inductive approach is often used in qualitative research and also corresponds to the method of narrative analysis that is used to analyze the results of this research.

### 4.2 Research method

In Finland, previous research has concentrated on the development of different theoretical models for achieving growth in the Finnish organic food market. The farmers’ opinions and subjective situations have not often been the focus of research. However, just as consumer preference studies concerning the consumption of organic products, it would also be important to study the farmers’ needs and how to support them in organic farming or choosing organic farming. Dr. Harris from the University of Hertfordshire stated in her presentation that it is important to “listen to, record and act” on the farmers’ views (Harris, n.d.). According to Dr. Harris, a qualitative research method is useful for discovery and explanation.

For the above mentioned reasons, this research uses a qualitative method; it is the only possible way to reach the answers to and an in-depth understanding of the research questions. Qualitative research supports the aim of putting emphasis on the farmers’ view and gaining in-depth understanding of the research questions (Hennink et al., 2011). Quantitative research such as surveys among organic farmers does identify factors or variables that affect the decision to choose organic production, but is not sufficient to find specific and subjective reasons and motivations behind the decision to choose organic production (Fairweather, 1999). Qualitative research is important in order to understand how sustainability as well as other factors influence the farmers’ decision to choose organic farming. This research uses a qualitative method for both data collection and data analysis. As the only used data collection technique is semi-structured interviews and the analysis technique is narrative analysis, this is a mono-
method qualitative study (Saunders et al., 2016). As is often the case in qualitative research, data collection is non-standardised.

Qualitative research is often done in a natural setting to establish trust and in-depth understanding (Saunders et al., 2016) and the farmers interviewed for this research were met at their farms to conduct the interview in their natural setting – the reasoning behind this decision was that it would encourage farmers to talk freely about their work and way of life when they are in a setting that inspires them to do that; many farmers are very proud of their farms and are happy to show it to others. Also, a familiar setting may help them relax and feel comfortable, which can promote trust and interaction between the interviewee and interviewer. When it comes to interviewing techniques, Rapley (2001) encourages interaction between the interviewee and interviewer rather than concentrating too much on specific techniques.

Organic production has previously been studied using qualitative methods. For example, da Veiga Dias et al. (2015) mapped and analysed publications related to the organic food market and found that the prevailing methodology was qualitative research. Also in this study, the research questions are approached through qualitative research that relies on semi-structured, in-depth interviews with farmers that have chosen organic production. Eyhorn (2007) carried out an extensive research on organic farming in developing countries, specifically organic cotton farming in India, in the context of sustainable livelihoods using a mix of quantitative and qualitative methods. Qualitative research was needed especially in analysing the adoption of organic farming as a part of a livelihood strategy (Eyhorn 2007). Also Szente et al. (2003) used a qualitative research method, namely interviews with organic producers, in their situation analysis of organic food production in Hungary. This research aims to explore and describe, to answers questions such as 'how' and 'why' in regards to a specific industry which is organic farming, and this justifies a qualitative research method.

4.3 Participant selection

The target population of this research was organic farmers in Finland which can be considered as a fairly homogeneous group – this can indicate that a fewer number of participants is needed (Hennink et al., 2011). The recommended minimum sample size for a research using semi-structured interviews is 5-25 (Saunders et al., 2009). The aim is to achieve in-depth information rather than a large sample, which justifies a fewer number of participants (Hennink et al., 2011). The purpose of this study is not to find
generalizable results, indeed the purpose of participant selection in any qualitative research is not to reach generalize findings to a broader population (Hennink et al., 2011), but to explore the research topic and find out whether some conclusions can be drawn from the qualitative data that is obtained. Because of these reasons, nine participants were considered to be sufficient and realistic given the timeframe and resources. The participants for interviews were chosen among farmers in Southern Finland. The area restriction is because of financial- and time restrictions. The participants were found through social media, namely a Facebook group for organic producers, as self-selection sampling, as well as through gatekeeper sampling.

The participants were chosen by using a non-probability sampling method – this is appropriate since this research does not claim to produce generalizable results through a statistically representative sample of the target population (Saunders et al., 2009). A combination of sampling techniques is often needed and, as in this research, the available resources were also something that needed to be taken into consideration (Saunders et al., 2009). Therefore, a couple of non-probability sampling techniques were used.

4.4 Sampling techniques

Self-selection sampling was utilized when the author published an advertisement in a Facebook group, which resulted in willing participants contacting the author. This Facebook group was a group for organic farmers, and the advertisement shortly described the research and its objectives, asking willing participants to contact the author either through Facebook or by email. Usually the risk with self-selection sampling is that the participants are not representative of the target population but are individuals, that have strong feelings or opinions about the stated research questions (Saunders et al., 2009). However, the results show, that in the case of this research, there did not seem to be a problem regarding this, but the motives of the participants varied. Some simply wanted to help research as they have done research themselves and the reasons behind choosing organic production were also diverse, which indicates that not only those who feel passionately about sustainability or organic farming participated in the research. On the other hand, the results show that adopting organic farming methods can result in a more passionate view about organic farming and it seems many start to support organic farming more than they had before coming organic farmers themselves.
Gatekeeper sampling was used in some of the cases: some of the participants were selected through contacting them directly and the contact information was provided to the author by a participant in the research, that has a prominent role in the local community and is an expert in the field of organic farming, i.e. is a so-called gatekeeper (Hennink et al., 2011). Sometimes the problem with gatekeeper sampling may be that the gatekeeper can control which participants are chosen for the research and by doing this, affect the sample and the results; this is called gatekeeper bias (Oppong, 2013). In this case, the risk for such bias is low since the farmers whose contact information was obtained by this one participant do not work for the participant or with the participant or in any co-operation with the participant and were not aware of the research until contacted by the author.

Even though these sampling techniques do include some level of risk for bias, the author was able to contact and interview farmers that have a lot of knowledge on the subject and through which important information could be obtained and answers to the research questions could be found. The aim of the research was to study the reasons for choosing organic production and even though this is a subject that may provoke feelings, organic farms are still businesses and according to this research, it seems farmers do make decisions from a business point-of-view, taking in consideration what is profitable and sensible in the long run. This indicates, that decisions are not made on a ‘feeling basis’ any more than business decisions in other fields.

In the participant selection, there were no restrictions such as farm size or production type, the only restriction for participants was that they had to be organic producers and in the Southern part of Finland. This research could yield implications for further research based on for example farm size, how long the producer has been involved in organic production or based on the type of production.

4.5 Data collection

During the participant selection process and agreeing on interview times, the author received feedback from several farmers stating that the topic is very important to study and that they feel that it is essential that someone takes on the task of listening to the farmers. Farmers have very busy lifestyles with little free time to answer questionnaires, so they may be more inclined to agree to an interview, especially if it is to be conducted in a way that disrupts their daily duties as little as possible. In this
sense, the beginning of the year was a good time to conduct the interviews as the spring duties of farmers had not yet begun and it is a quieter time of year for them.

4.5.1 Interviews

Primary data has been collected through semi-structured, in-depth interviews with organic producers. Interviews were conducted one-to-one. This personal contact can help establish a relationship where trust can be built between the interviewee and the researcher. Saunders et al. (2009) also state that they have found that managers are more likely to agree to an interview than answering a questionnaire, and this is especially true when the research topic is seen as interesting or relevant to their current work. The semi-structured interview is also what Dr. Harris recommended in her presentation (Harris, n.d.).

A semi-structured, non-standardised, interview technique allows for a more free flow of conversation as the interviews are very subjective and specific to the situation of that particular farmer and rely on open-ended questions. The interviews were conducted following an interview guide (Appendix 1) and certain themes, but gave room for conversation. The interview guide includes themes and questions related to the research topic, starting with why organic production was chosen and including questions about the different dimensions of sustainability and whether they were a factor in the decision-making process and if they relate to the farmer’s work on an everyday level. Some political issues were discussed as well, to establish the political framework in which the farmers work, since the government subsidies that are the result of political decision-making, form an important part of the farms’ profitability and economic sustainability. A semi-structured interview technique includes the use of core questions and allows flexibility to explore answers in more detail (Harris, n.d.).

The focus was on the farmer’s point of view and the interviewees were allowed to tell their own story and elaborate on their views and answers. Some answers could be detailed by asking further questions on the topic and encouraging the farmer to tell more about their decision, opinion and answer. Semi-structured interviews are widely used and often referred to as qualitative research interviews. Also, since the purpose of this research is to understand the reasons behind choosing organic farming and the opinions and attitudes on sustainability, semi-structured interviews was an appropriate data collection method (Saunders et al., 2009).
4.5.2 Practicalities of data collection

The purpose was to study farmers in their natural setting and concentrate on their views and perceptions on the research questions as well as find meanings behind their choices, therefore justifying an interpretive approach (Hennink et al., 2011). Consequently, interviewees were visited on their farms in order to establish a relaxed and comfortable space for the interviews and to gain a true in-depth understanding of their situation and reasons for choosing organic production. When telling narratives, it is important for both the researcher and the research subject to feel comfortable (Moen, 2006).

One main focus of this research was sustainability and whether farmers think that the principles or dimensions of sustainable development or the national policies in place to promote organic farming had anything to do with their decision to choose organic production and if it is something that they consider in their operations. As mentioned before, this is a qualitative study and the aim is to learn directly from the farmers; what is their perception of sustainability and organic farming, what are their main priorities and do national policies affect their perception of sustainability or have implications in their decision to choose organic farming over conventional farming. An interview will provide the type of qualitative data that I would not be able to collect through questionnaires.

The time spent on any individual farm was not be pre-determined but the required time for going through the themes and questions took shape during the interview process. The interviews were audio-recorded. The interviewees were provided with a fact sheet about the research and what it is about and the themes that will be covered, they were asked for consent to record the interview, they were given information on how their answers will be handled in confidentiality (no names or other identifying specifics will be published) and that they have the right to get the final thesis. They were also given the opportunity to refuse to answer any questions or withdraw from the project at any given time. The author wanted to provide the interviewees with a small thank you for participating in the research, so every participant was provided with a pair of movie tickets. This was not mentioned in the participant selection process to avoid participants volunteering solely for the purpose of getting the reward.
4.6 Data analysis

Both the data collection and the data analysis in this research was done by using qualitative methods, which makes this research a mono-method qualitative study (Saunders et al., 2016). Mirroring the inductive research approach, the approach for data analysis is also inductive (Saunders et al., 2016); this research revolves around understanding the social context and perceptions of the participants as well as the meanings that can be identified in the collected data instead of relying on existing theories. As with qualitative research, narrative research does not aim to produce one definite truth, but just one version from a specific point of view (Eriksson & Kovalainen, 2008), which in this case is the farmer's point of view. This justifies narrative analysis.

As the interviews in this research are essentially stories or narratives on what has led to the participants choosing organic farming as their business, the data is analyzed using narrative analysis. During the interviews, the participants talked about their history as farmers: how they became farmers or involved in primary production, if they were conventional producers before converting to organic and what their feelings were about their past as conventional producers and what changes happened in their life and their business to encourage making a change and adopting organic production. They also describe their business and their farm at the present time; and, as farming is an all-consuming profession that strongly affects the everyday life of producers even outside of the actual work, they also talk about how organic production affects their personal life choices for example. These are personal narratives focusing on a specific episode (Eriksson & Kovalainen, 2008) which is choosing organic farming. Narrative data is analyzed as a whole and preserved in its context (Saunders et al., 2016), which is important in this case in order to understand the decisions of farmers.

4.6.1 Narrative analysis

This research adopts an inductive research approach and a qualitative research method, and results are analyzed using narrative analysis. Narrative analysis is often used in qualitative and interpretive research philosophy (Moen, 2006). The narratives of the farmers are studied in a social, cultural and political context and the results are interpreted in this setting, which means is an interpretive research philosophy (Bhattacherjee, 2012). Narrative analysis enables the systematic study of personal stories, ie. narratives (Riessman, 2005). In narrative analysis, the researcher interprets
the stories told by research subjects and makes conclusions (Allen, 2017) and the narratives should be analyzed in the storyteller’s social, cultural and institutional context (Moen, 2006). As mentioned before, the conclusions of this research are not generalizable but will offer frames and indications. The reasons for choosing organic production can be divided into themes.

Narrative analysis can be divided in two models: thematic narrative analysis that emphasizes meaning or structural narrative analysis that emphasizes structure (Saunders et al., 2016; Riessman, 2005). This research specifically utilizes thematic narrative analysis, as the objective is to concentrate on the content of the narrative rather than how the narrative is constructed (Saunders et al., 2016). In this research, the outcome of a past action is already known: all of the participants have chosen organic production in some point of their lives. The objective is to study how the past life choices or paths have influenced the decision for adopting organic farming and what the reasons are that led to that decision. The meaning of a narrative refers specifically to the content of the story: what happened, where, when and to whom (Eriksson & Kovalainen, 2008).

The interviews for this research were semi-structured, as the goal was to go through certain themes, but they were very much dialogues and informal in nature. If the narrative analysis was done by someone based only on the transcripts of the interviews, there would be a risk that patterns were categorized into themes based on what was said, not taking in consideration the way in which things were said; people do not always mean the same thing even though they use the same words. In this research, the researcher did both the interviews and the analysis of the transcripts and used notes, and memory, from interviews to take in consideration how things were said. The researcher’s own interpretations and attitudes do affect the result to a certain degree, and it is important to be candid about the subjectivity of the researcher in order to ensure the quality of the research (Moen, 2006).

4.6.2 Thematic narrative analysis

The narratives are analyzed by searching for themes across the different narratives and these themes are identified without breaking apart the narratives (Saunders et al., 2016). The narrative analysis is done based on the textual narratives, that are transcriptions of the interviews. These transcriptions are explored to find common themes and patterns. Thematic analysis enables narrative analysis, that is an
interpretive method, i.e. an in-depth analysis – thematic and narrative analysis are flexible and have been widely used together (Shukla et al., 2014). The narratives are analyzed by using thematic narrative analysis utilizing a model described by Jodi Aronson (Aronson, 1995). The steps are as follows:

1. First the data is collected by recording the semi-structured, in-depth interviews with farmers. The interviews are transcribed and common patterns are identified from the transcriptions.

2. Next, the data is classified under the patterns that were identified in the first phase.

3. In this phase, the classified data patterns are categorized into themes.

4. In the last phase, themes to explore are chosen and results are formulated and analyzed according to these themes.

The themes presented in the Results-part were chosen based on a few factors; first of all, how often the themes came up in the narratives and if there was a common pattern, and second based on their connection to sustainability. In the results, patterns and narratives regarding the themes are discussed. The narratives in the results include for example, what factors influenced the farmers’ decision to convert to organic farming, how their perception of sustainability has developed and what kind of future story they want organic production to have.
5 RESULTS

Converting to organic farming impacts the 'socio-economic space' of the organic farmer, for example by decreasing the dependency on traders in pesticides and chemical fertilizers (Eyhorn, 2007). In fact, independence from chemical companies is something that some (2/9) of the farmers in this research mentioned as a positive change after converting to organic farming; they felt that they did not want to spend their money on supporting the business of these big, centralized corporations. Avoiding chemicals was also a major reason for choosing organic production, which we will get back to later on.

During the interviews, the economic benefits of converting to organic farming were discussed. All farmers interviewed for this research admitted, that the organic farming and national agricultural subsidies do form a large part of their income and the higher price of organic products also supports converting to organic farming. However, it became obvious that economic reasons were not enough to establish a successful and sustainable organic farming business; mainly because organic farming requires a higher labor input and also very specific knowledge and skills for it to be successful and for achieving sufficient crop yields. Indeed, Eyhorn (2007) found in his extensive study of converted organic cotton farmers in India, that the adoption of organic farming requires not only acquiring specific skills and know-how, but a change in attitude and developing emotional ownership of organic farming and an identity as a group.

This group identity may have formed in Finland partly as a result of the attitude of conventional farmers towards organic farmers; some years ago, organic farmers were still considered to be 'ideological farmers' whose farming technique could never compete with the efficient conventional farming. This may have caused organic farmers to feel even more a part of a special group and strengthen the bond between organic farmers. According to the farmers interviewed for this research, this attitude of conventional farmers towards organic farmers is changing; they have seen the possibilities and profitability of organic farming and are slowly but surely changing their opinion.

Even though the interviewed farmers were happy with their choice of organic farming and none were considering converting back to the conventional way of farming land or producing food, there was an overall concern about the future of farming and agriculture in general in Finland. The profitability of farming and food production is
low, especially with smaller and medium-sized farms. Many farmers estimate that in order to make farming a profitable business, the farm should consist of hundreds of hectares of land, some mentioning numbers such as 200 or 300 hectares. In 2017 there were 48,562 farms in Finland with the average size of only 47 hectares (MTK, 2018b). Only 10% of farms were classified as large, meaning over 100 hectares or, in the case of dairy farms, having at least 100 milking cows (Luke, 2018a). In recent years, the profitability of farms has been poor and the amount of farms has decreased with a speed of almost 3% per year and the amount of dairy farms by 7% per year, while the average size has grown by 60% in the 21st century (Luke, 2018a). Many of the interviewed farmers had to work outside of the farm in order to make a living, which is quite common with crop farmers in Finland. The general feeling is that farming will not make you rich, but if everything goes according to plan, you may be able to break even. Economic profit is not a reason to become a farmer, but the better economic profitability of organic farming is for many farmers one of the reasons for choosing organic methods in particular.

The reasons for choosing organic farming are manifold. The motivations for choosing organic farming are often either related to the farm or personal (Zinati, 2002). In this research, in most cases, it seemed that the reasons for choosing organic farming were often both farm-related and personal. This division will not be used in the analysis of the results in a larger scale, but just as a mention, it can be said that only a couple of farmers specifically mentioned that the farm could not have survived in conventional farming and this being the main reasons for choosing organic farming. Even these farmers though have come to see the better sustainability of organic farming methods. Others, while admitting the better profitability of organic farming, did have a personal attachment to organic farming and opinions regarding the environmental, economic and social sustainability and benefits of organic farming. In the following sections, we will look into the results of this research in more detail.

5.1 Demographics

The majority of interviewees for this research were men, 7 out of 9. Persons employed by agriculture are in general more often men than women. About one third of persons employed in agriculture and forestry and of persons employed in agriculture and animal breeding were women, with the percentage being 32.5% and 35.2% respectively (Statistics Finland, 2018).
The farms in question are situated in three different counties in Southern Finland: four are in the Uusimaa region, three in Southwest Finland, one in Pirkanmaa and one in Häme. In 2017, the region with the second most farms in Finland was Southwest Finland with 5175 farms, Pirkanmaa was fifth with 3782 farms, Häme was sixth with 3504 farms and Uusimaa eighth with 3173 farms (Luke, 2018b).

When reviewing the size of the farms included in this research, I will report the size of farmed land, whether it is owned or rented, in hectares. Farmed land includes all land in production use that is certified organic and also land that is used for pasture for animals in organic production. The average size of farms in this research is 173 hectares, with sizes ranging from 65 to 350 hectares. The average size of all farms in Southwest Finland in 2017 was 56.78 hectares, in Pirkanmaa 43.66 hectares, in Häme 53.05 hectares and in the Uusimaa region 57.08 hectares. The average farm size in the whole of Finland was almost 45 hectares and farms that are over 100 hectares in size are considered large farms (Luke, 2018b). The farms in this research were therefore larger than the average farm size (information of one farm is missing). This can affect the profitability and economic sustainability, actual or perceived, of the farms.

Two of the farms in this research produce both crops and animal products. It could actually be beneficial for both business areas to produce crops and animal products; some of the crops can be fed to animals and animals produce for example manure as a natural fertilizer for fields. However, politics and how subsidies are divided to different areas of Finland often make it more profitable to produce crops in Southern Finland and the areas where the interviews were carried out, whereas in Northwest Finland the production of animal products is more supported economically. In this research, one farm only produces meat and animal products and altogether eight farms produce crops.

When it comes to the type of company, most farmers prefer the company type of farm; it seems for them to be the most simple way of running a company when it comes to for example taxation. In this research, there were seven farms, one private entrepreneur and one farming cooperative.
5.2 Patterns and themes

In the narratives of the interviewees, certain themes regarding the research questions could be identified across the interviews, according to thematic narrative analysis (Saunders et al., 2016). Following the previously described process of thematic narrative analysis (Aronson, 1995), common patterns were identified across interviews under which data was classified and then the related patterns were categorized into themes. The reasons for choosing organic production were categorized in three categories: 1) business, under which reasons related to business were categorized, 2) external, under which reasons affecting external circumstances were categorized and 3) internal, under which reasons that stem from the farmers’ internal dialogue were categorized.
Research questions 2 and 3, related to the farmers’ perception of sustainability and how it affects their work as organic farmers, were specifically used for developing a new proposed framework of sustainability in organic farming. This framework is presented at the end of the results part.

When it comes to the national policies of sustainable development and organic production, the farmers seem somewhat detached from these political issues. The national policies have affected their decision through the organic farming subsidies that are paid out to farmers in Finland, but in other ways political decisions and policies are not a defining factor in the conversion to organic farming. However, the farmers have a lot to say about the agricultural politics in Finland, and provided some potentially useful insights on how to improve policies and hopefully increase organic production and reach the Finnish government’s goals for sustainable development.

The results to each research question are described in the following.
5.3 What are the main reasons for choosing organic production in Finland? (RQ1)

There is a variety of reasons for choosing organic production. What have been included in this section, are reasons that the farmers themselves specifically mention as their motivation for organic production and ones that could be identified in the themes of the narratives. What is interesting to note, is that a reason appears when making the decision to choose organic farming, but that even after your choice, you still need to stick with your decision and justify it to yourself and to others. There are also reasons for sticking with your decision and your opinions and point of view might even change during the years, while you learn more about farming and organic farming methods. It is therefore not a single choice made in one point in time, but it is something that you choose over and over again.

Profitability 6/9

6 out 9 farmers interviewed for this thesis say that the better economic profitability of organic farming affected their decision. The better profitability consists of organic production government benefits, agricultural benefits and the higher market price of organic products which enables the farmer to get a better profit margin.

Avoiding chemicals, food safety and health concerns 5/9

The farmers commonly call pesticides and chemical fertilizers ‘poisons’. 5 out of 9 farmers said that one of the reasons for choosing organic production was to avoid using these ‘poisons’. Some had used them previously and based on their experiences did not want to continue using them, and some had never used them and did not want to start.

Sustainability 4/9

4 out of 9 interviewees mention sustainability as a term affecting their decision to choose organic production. Sustainability to farmers means many things, some think of it in a larger context and some in the context of their own farm and keeping it viable for coming generations.

Meaningfulness, interest, motivation and ideology 4/9

Meaningfulness is composed of many aspects such as being able to affect the result of your work, seeing progress, learning. Also an interest in the farming techniques of
organic production, better motivation through meaningfulness and the organic farming fitting in to their ideology were reasons that 4 out of 9 farmers said made them choose organic farming.

**Independence 2/9**

For a couple of the farmers interviewed for this research it was important to gain independence from large agrochemical and agricultural corporations and choosing organic farming helped them do that.

**Strategic choice 2/9**

Two farmers state that it was a strategic choice to start organic production, in addition to other reasons. It was a strategic choice because the target market is more specific and the products can be sold at a higher price. There are studies that indicate, and many farmers agree, that specializing is a way to do better business and tackle a niche on the market. Many small business owners choose niche markets for the possibility of better profit margins and lower competition (Voicilas, 2013).

**Environment and biodiversity 2/9**

2 out of 9 farmers specifically mention environmental reasons and supporting biodiversity as affecting their decision to choose organic production. They say that environment and biodiversity are things that cannot be overlooked and organic farming is something that they can do to improve biodiversity and protect the environment.

In addition to the above reasons, there are some other statements that I would like to highlight. A couple of farmers said that the years they have worked or studied elsewhere has made them see the bigger picture, look at agriculture from a wider perspective – from the outside in – and develop an interest in environmental issues. The decision to choose organic production can be evaluated as being easy for about half of the interviewees, because: the previous generation of farmers had already made that choice; or the farming techniques had been used on that specific farm before so they did not require as much learning; or chemical pesticides had not been used on the farm before either; or conventional farming was not even seen as an option because of ideological reasons. One farmer said that they had no choice but to convert to organic farming because it was economically impossible to continue in conventional farming.
5.4 How do Finnish organic producers perceive sustainability and has it had an effect on their decision to choose organic production? (RQ2)

The farmers interviewed for this research recognize the traditional “triple bottom line” definition of sustainability; people, planet and profit, i.e. social, environmental and economic. However, what they really feel sustainability is and how they perceive sustainability, is a more complicated question. For many of the farmers, sustainability is something that they have come to think about more only after converting to organic farming; after all, only 4 out of 9 farmers specifically mentioned sustainability is a reason for choosing organic production, but 8 out of 9 feel that after converting to organic farming, sustainability has become more important to them. For the farmers interviewed for this research, organic agriculture and sustainability go hand-in-hand. They are inseparable and the farmers can identify all of the dimensions of sustainability in organic agriculture and in their own production.

Many of the farmers think a lot about how to make their farm and agriculture in general more sustainable, how to use circular economy and still have a reasonable level of productivity and good enough yields. What many of the farmers emphasize, is that...
sustainability is not just a belief or an ideology, but it is a rational and profitable way to farm land. It is not enough to believe in sustainability, but you have to incorporate sustainability with a business model that can provide a living for the farmer and the farmer’s family. A couple of the farmers have expanded to other businesses that are based on sustainability and circular economy, such as bioenergy.

With farming not being a generally very profitable business, farmers are constantly innovating and coming up with new ways to farm land in a way that is both sustainable and profitable. Economic sustainability is the one most important reason for choosing organic farming in the first place. Most of the farmers perceive sustainability as the better economic viability of their farms and a couple feel that the poorer economic sustainability of conventional farming was a strong driving force behind their decision to convert to organic farming. One even said that they had no chance economically to continue in conventional farming and that this was the main reason for converting to organic farming.

Time is something that comes up consistently when evaluating sustainability and how it has affected the farmers’ choices and farming practices. Time has been mentioned in many studies and articles as one of the newer aspects included in sustainability (Seghezzo, 2009; Bansal & DesJardine, 2014; Kohl, 2016). Farmers think a lot about the future, and 5 out of the 9 farmers say that they think about sustainability in the concept of time and in relation to the future. They consider sustainability and time as:

- Thinking about the future, in the perspective of hundreds of years and several generations; making long-term plans for their farming.

- Being able to preserve natural resources for future generations; so that also future generations are able to farm land.

- Planning your farming operations many years in advance; for example, certain crops must be farmed for a certain amount of years and fields also need years when they are not farmed and are “resting”.

- No waste of nutrients and letting them drain into the bottom of the sea where they cause harm to the environment; you cannot get those nutrients back. Recycling nutrients requires planning.
Farms that have been owned and farmed by the same family for generations; there is a strong sense of pride and tradition in farming and the farmers want to leave a well-kept and sustainable farm behind for their children and grandchildren. Many hope that the farm will stay in the family.

The results of your farming decisions are not obvious right away, but sometimes you have to wait for results for several years; you must be patient and analyze your decisions and farming work in a longer time perspective.

The growth potential and fertility of land in organic farming improves slowly during several years – this affects the profitability of the farm, so also profitability is something that can only be evaluated during the timespan of several years. Organic farming is seen as more profitable in the long run than conventional farming.

In organic farming, time is something that affects and interacts with all of the other dimensions of sustainability. Environmental sustainability in organic farming is preserving natural resources so that farming is possible for future generations and protecting biodiversity that affects farming. Social sustainability in organic farming is enabling local communities to live on and survive in the future. Economic sustainability in organic farming is operating so that the farm is profitable and therefore viable, and to be able to leave a farm behind for children, grandchildren and future generations where they are able to make a decent living. Cultural sustainability in organic farming is respecting history and the conservation of the cultural landscape of the farm and the surrounding community. All of these include some aspect of time.

The social aspect of sustainability appears to be a very important one for the farmers when describing and narrating what sustainability means to them. All but one of the interviewees bring up the importance of the community formed by organic farmers. They feel that they have a strong network of farmers that offer tips, help, cooperation opportunities and support to each other. It is an important psychological resource for farmers. Organic farmers have a strong sense of community, which may partly be the result of having to previously defend your choice of organic agriculture, when the larger majority of farmers did not yet believe in the viability of organic farming. The farmers also describe organic farming as being a constant learning experience and that they learn a lot from each other. They also feel a part of the local community and often want
to for example offer work for local employees and support the local community in other ways.

The environmental benefits of organic farming naturally relate to how farmers perceive sustainability. The farmers especially mentioned better soil health, carbon sequestration, sustainable water management and biodiversity as the environmental benefits of organic farming. Several studies support this perception of better soil health (Gosling & Shepherd, 2005; Boldrini et al., 2008), carbon sequestration (Sukkel et al., 2008; Cooper & Melchett, 2008), sustainable water management (Kilcher, 2007; El-Hage Scialabba, 2013) and the positive effect of organic farming on biodiversity both in plants, landscape and for example insects (Rundlöf & Smith, 2006; Roschewitz et al., 2005; Bengtsson et al., 2005). Circular economy and the re-use of nutrients were mentioned by some of the farmers, and a couple are also involved in developing new kinds of ways to use bioenergy. Environmental sustainability is a very wide and comprehensive concept for farmers and they realize the larger impact that farming has in the surrounding environment.

Almost all of the interviewed farmers (8 out of 9) say that converting to organic farming has made them consider sustainability in a larger scale in business and personal life, where they base their consumption and other decisions more with environmental concerns in mind. Similarly, almost all (8 out of 9) feel that they take the environment and biodiversity in consideration in their work as organic producers. However, only four of the farmers specifically identified sustainability as one of the reasons for choosing organic farming. It seems that the farmers’ perspective on sustainability has developed during their time as organic farmers and they have acquired a deeper understanding of sustainability through their work. It can be said that naturally, at least in the case of the four farmers that mention sustainability specifically as a reason for choosing organic farming, their perception of sustainability affected their choice but that their perception has matured and progressed only after converting to organic farming, and organic farming has also made them pay more attention to sustainability.

5.5 How is sustainability incorporated in their business as organic producers? (RQ3)

The farmers themselves do not necessarily think about how the different dimensions of sustainability show in their business but when interviewing them it was apparent that they do support many of the dimensions of sustainability presented in this thesis:
economic, environmental, social, cultural and time. 8 out of 9 farmers feel that after being involved in organic production, they think more about sustainability in their business and farming as well as in their personal life. They consume more organic food and make choices taking environmental effects in consideration.

**Economic sustainability**

In this research, economic sustainability contains both the profitability of farming and the ability to conserve and develop the farm as a business in a way that future generations can continue the farming and that a viable farm and business is left for them. 5 out 9 of the farmers interviewed for this research specifically talk about the economic sustainability of their farm in organic farming, and being able to leave something for future generations. They feel that organic farming is their best bet for preserving the family business.

Organic farming is more economically sustainable because, at least in the current market situation, farmers can make a better profit from organic products as they can be sold for a slightly higher price. Some farmers also mention savings from not having to buy fertilizers and pesticides and the government subsidies and economic support also play a big role. The farmers also feel that organic farming is a more sustainable way of farming and will give them a chance to build a business that will last for generations to come.

**Environmental sustainability**

Environmental sustainability is of course important in organic farming, and 8 out 9 of the interviewed farmers specifically talk about environmental sustainability in their work. The actions of the organic farmers interviewed for this thesis aim to take into consideration biodiversity in for example the natural fields, the diversity of different animal species, even insects and butterflies, and wide variety of plants. Everything the farmer does reflects not only to the field but to the forest around the field, water systems, birds, animals, insects, butterflies and the producer himself. Some farmers also mention the environmental impacts that organic farming has through the delivery and transport of produced goods; for example, how to best utilize road transports and logistics.

They also want to support circular economy. It is just common sense that it is better to use nutrients to your advantage as much as possible rather than letting them drain in to
the sea for example, and farming techniques used in organic farming could also be utilized in conventional farming. Political decision making could support the promotion of circular economy. A few of the farmers co-operate with universities and researchers from other organizations in promoting for example circular economy or improving the wellbeing of production animals.

Organic farming combines environmental sustainability and a more ethical way to produce cleaner food. It improves the condition of the soil which will then in turn enable better crop yields. It also supports circular economy and comprehensive sustainability. A couple of the farmers are involved in other business ventures that promote sustainability or try to operate in a sustainable way; for example, the production of bioenergy and a new, innovative cooperative food production system based on energy and nutrient self-sufficiency (Palopuron symbioosi, n.d.). However, even with all the environmental benefits of organic farming which might make it seem like a clear-cut choice, when a new farmer adopts organic farming methods, it is important to make it clear to them how they and their farm can benefit from converting to organic farming.

**Social sustainability**

4 out of 9 farmers say that they try to support local employment by employing workforce from their own local town. They also talk about supporting local communities and even about forming their own communities for example around co-operation in organic production or events such as community theatre. The surrounding community is of course an important part of many of the farmers’ lives, as their farms have been a part of the local community for a long time, in some cases centuries, and over many generations. Farmers are usually also well known in their community.

What is especially notable is that there is an overwhelming sense of community within the organic farmers. 8 out 9 say that there is co-operation, networking and support among organic farmers. 5 out of 9 work in practical co-operation with other farmers, for example sharing machinery, dividing work and resources and producing bioenergy. Many mention that they turn to other organic farmers with problems or questions with their farming and feel that they can always get help from other organic farmers. This seems to be a very important thing for them. Farms also form communities, where savings can be made by purchasing just one set of machines needed for farming, which
several farms can then use together. Farms work together, and sell their products in co-operation.

**Cultural sustainability**

6 out of 9 of the interviewed farmers think that they support cultural sustainability with their own actions or produce culture themselves. They feel for example that it is important to preserve their family’s and local history and protect the rural landscape. Some offer for example working space for artists or arrange community theatre nights. Some farms welcome visitors such as school groups, students or tourists and like to share the cultural history of their area and community. A few of the interviewed farmers call it environmental culture. Many also want to promote cultural values even more in their operation in the future.

**Time**

4 out of 9 farmers specifically mention the time aspect of sustainability stating that as organic farmers they take into account a longer timeline. This can be either in the larger perspective of the future of the planet or in the smaller perspective of the future of the farm. Farmers think about time in planning the future farming of their land and their production and in leaving a viable, healthy farm and environment for future generations.

Time is also a central concept in the everyday work of the interviewed farmers, because in organic farming, you have to make plans for several years at a time; what crops to farm which year and which fields to leave to rest, how to best time harvesting and so on. In the interviews it became apparent that organic farmers have to farm according to nature’s schedule and an appreciation towards nature and a feeling of being on the mercy of nature could be noticed.

**Sustainability: own actions**

Almost all of the farmers (8/9) feel that organic farming has made them take sustainability in consideration more in their business and from a wider perspective. They also incorporate sustainability in their personal life and use more organic products and/or make other choices with sustainability or environmental concerns in mind. In the operation of their farm, many farmers mention that their farm needs to be
built on a sustainable foundation environmentally, economically and socially in order for it to survive for generations to come.

![Sustainability in organic farming](image)

Figure 7  Summary of how sustainability shows in the farmers’ organic production.

5.6 How do the national policies of sustainable development and organic farming affect their business and their decision to choose organic production? (RQ4)

The national objective is to increase the area of organically farmed land to 20 % by the year 2020. When it comes to national policies, the most relevant and obvious effect they have are the subsidies paid out to organic farmers. 8 out of 9 farmers say that organic production subsidies and national agricultural subsidies form an essential part of their turnover. Farming is in general not a profitable business and organic farming needs subsidies in order to survive. Almost all (8 out of 9) of the interviewed farmers say that the economic support that the Finnish government and the EU offers organic farmers and the national agricultural subsidies form at least 1/3 of their turnover or is in some other way a central part of their profitability and business.

Subsidies have also been one of the important aspects that forms the better profitability of organic farming, which is one of the main reasons for choosing organic farming in the first place. The economic benefit and better profitability of organic farming, which in part derive from the national policies of sustainable development and organic
farming as incentives to reach the goals of these policies, have therefore been a major factor for farmers in converting to or choosing organic production. However, in general, farmers have not considered the national policies in a larger scale when choosing organic farming.

It does not look likely that we should reach the national objective for organic farming now that the Finnish government has stated that the budget for organic farming subsidies is used up and no more subsidies will be paid out during this term, which lasts until 2020 (Holmberg, 2018). This is exactly what some of the farmers were worried about; in the interviews, some expressed doubt that the Finnish government would have enough money to pay subsidies for all the new farms converting to organic production. With our without the government paid subsidies, farming in a sustainable way has to be beneficial for the farmer and enable a profitable business – while government support is important, the decision to choose organic production should not be based solely on the better government benefits that are paid out to organic farmers.

Despite the doubts, all of the participants in this research did have a positive attitude towards the government’s goal to increase the organically farmed area. Some farmers thought that 20% is enough while some thought that the organically farmed area could be even larger and the goal could be set higher. National policies, laws, regulations and economic incentives could help reach this goal. As subsidies depend on the type of production and the region, national policies guide the choice of production in different areas of Finland. This might not necessarily be a good thing; it has resulted in animal production being more centralized to Ostrobothnia and crops to Southern Finland, when in fact in organic production it would be more beneficial to have animal and crop farms closer together as they can benefit from each other, for example by crop farms providing feed for animals and animals providing manure as a natural fertilizer on organic fields. Also, it may be argued that the inevitable logistics due to this concentration of production in different parts of Finland, is not very environmentally friendly either.

5.7 A proposed new framework for sustainability in organic agriculture

In the described theoretical framework and overview of previous research, specifically five different dimensions of sustainability could be identified and linked to organic agriculture. Based on these and the results of the research, a proposed new framework for sustainability in organic agriculture was developed.
**Economic sustainability.** Farming as a business in Finland has been difficult in recent years, with primary producer prices decreasing, meaning that primary producers get a smaller share of the actual price of a product. At the same time, in conventional farming, the price of fertilizers and pesticides has increased. According to the author’s knowledge from attending farmers’ meetings and being a part of the farmer community, conventional farming in general is no longer profitable. On the other hand, the price of organic products is still on quite a good level and without the costs of chemical fertilizers and pesticides, organic farming is, in general, still profitable. With correct farming techniques and well-chosen crops, also crop yields can be on as good a level, or even better, as in conventional farming. The government subsidies form a large part of the farms’ turnover. These things enable organic farmers to go on and keep their business alive and profitable. This is what economic sustainability means for them.

**Social sustainability.** Organic farmers have a tight network and support each other in questions or problems regarding their farming. This research shows, that the social relationships between organic producers are very important and they learn a lot from each other; the older, more experienced ones support and advice the younger ones that are just starting as organic producers. This is a good example of collective intelligence, and how the power of the group is larger than that of the individual members. Malone et al. (2009) refer to how the Internet has enabled new forms of collective intelligence – organic farmers for example have a Facebook group, where they can easily interact with others, ask advice and share success stories and tips.

Also, the community in which farmers live and work, is important for them. Many times these are smaller villages, where “everybody knows everybody” and the farms offer work for local residents. Many farmers collaborate in machine work for example so that the neighbour does the snow work with their tractor in the winters, and farmers may even jointly own different equipment needed for farming – thus saving the expense of buying and maintaining their own machines when they can share the expenses. There is a strong co-operation between farmers, which also contributes to the profitability and economic sustainability of farms. Farms are an important part of the local community by preserving the traditions of farming in that community and also by being an employer and helping maintain vivid countryside communities.

**Environmental sustainability.** This is a central part of organic production and one of the main goals of organic production. Environmental sustainability is also an inseparable part of organic production, because in order to achieve successful organic
production and sufficient crop yields, the farmer has to take environmental aspects into account. Since no chemical fertilizers or pesticides are used in organic farming, soil fertility is of crucial importance. Soil fertility cannot be on a good level if the environment is not taken good care of. An organic farmer needs to know the soil that they are farming: different types of soil are suitable for different kinds of crops. Or it might even be that the soil type is such that it makes more sense to have animals and produce animal products. Many farmers stated, that in organic farming you need to work in co-operation with nature. Most feel that they take environmental sustainability and biodiversity in consideration in their work.

Organic farmers also see environmental sustainability as important in order to be able to preserve land and soil for farming in the future as well – not using all the natural resources so that in the future farming on that land would be impossible. Taking care of soil fertility and soil health is important for crop yields as well; if one thing goes wrong, it can take years to repair. Many farmers also mentioned clean, Finnish food; it is personally important for them to have clean food to eat, without chemical residues. This is something that they themselves also want to produce. For the farmers in this research, it is also important to preserve the landscapes and the purity of Finnish nature, which brings us to cultural sustainability.

**Cultural sustainability.** Most of the farms that the author visited for this research were hundreds of years old and had been in the family for decades or even centuries. Farmers see it as important to preserve the traditional landscape of the countryside and renovate old buildings with respect to their original style. It is unfortunate that in many parts of the country, there is much less grazing cattle than there used to be. This is something that many farmers hope to see more of in the future. Many of the old mansions of the farms are an important part of the landscape in their village and have a long, interesting history. Farmers want to preserve this for future generations. They are proud of their farm’s history and it is tightly intertwined with the history and development of the village and the area. Many current farms have before been parts of larger estates, that formed villages in the past. Farms are a fundamental part of the entire landscape of an area and therefore have cultural value. Some farms also arrange cultural events, such as theatre performances, music events or demonstrations and offer tours for people that want to know more about the farm and its history. Finnish nature is held in high regard.
**Time.** Organic farmers need to make plans for the farming of crops for five years at a time. Whatever they do now, can have big effects many years into the future. This is why time came up in this research as one important dimension of sustainability. Organic farmers realize, that sustainability is very much about time and that the effects of their actions span over many years. As crop rotation is a central farming technique in organic production, it is important for organic farmers to have a plan for many years to come for example as to what crops to farm which year and how to keep the soil of their land in good condition.

Organic farmers have to have patience, because they are working on nature’s schedule with for example improving soil fertility. Organic farming requires commitment and an ability to predict the development of for example prices of crops, soil health, popularity of crop varieties and such things in the future in order to make good decisions. Time also ties together with cultural sustainability in for example conserving cultural history, with environmental sustainability in preserving natural resources for the future and with economic sustainability in having a viable farm for generations to come. Time encompasses all the other elements of sustainability in organic farming.

![Proposition for a new conceptual framework for sustainability in organic farming](image)
6 ANALYSIS AND DISCUSSION

The aim of this research was to answer the following questions, specifically within the sustainability framework:

RQ1. What are the main reasons for choosing organic production in Finland?

RQ2. How do Finnish organic producers perceive sustainability and has it had an effect on their decision to choose organic production?

RQ3. How is sustainability incorporated in their business as organic producers?

RQ4. How do the national policies of sustainable development and organic farming affect their business and their decision to choose organic production?

In this chapter, the results to the research questions that were presented in the previous chapter, are analysed and discussed in more detail.

6.1 Why farmers choose organic production

Reasons why farmers choose organic production have been divided into the following groups according to figure 4 (p. 49): business-related reasons such as profitability and business strategy; external reasons such as avoiding chemicals, environment/biodiversity and sustainability; and internal reasons such as meaningfulness and motivation, ideology and independence.

6.1.1 Business-related reasons

In an early 1990’s study it was found that both conventional and organic farmers shared a negative economic outlook on organic farming (Beharrell & Crocket, 1992). This might have changed over the years or be dependent on the country in question, because in this study the main reason for choosing organic production was the better profitability. This profitability consists of a few different things, mainly the higher price of organic products and the subsidies paid out to organic producers, because crop yields can generally speaking be lower in organic farming compared to conventional farming. In recent years, the profitability of organic farming has increased past the profitability of conventional farming, and in addition to the subsidies paid out for
organic production, also higher prices of products, larger farm size and lower production costs affect profitability in a positive way (Luke, 2017).

8 out of 9 organic farmers interviewed for this research stated that either subsidies form at least 1/3 of their turnover or felt that subsidies were essential for their turnover. In the light of this research it can be said that subsidies and other economic incentives are important in getting more farmers to choose organic farming and through this also increase the area of organically farmed land in Finland. Similar results have been found in the research of Kvist (1994) in Sweden where monetary support for new organic farmers was an important reason for choosing organic farming and in the German research of Bruckmeier et. al. (1994) where economic incentives were found to be a reason for choosing organic farming. Organic agriculture has been found to be more profitable and having a higher benefit/cost ratio compared to conventional farming (Reganold & Wachter, 2016).

In order to work towards the national goals for organic farming and organically produced food it is vital that the national budget for economic incentives and support for organic farming is well planned and that the government sticks to this plan and ensures that the budget is kept and is realistic. Some farmers interviewed for this research voiced their concerns of the government running out of money to pay as subsidies for organic farmers. In fact, after the interviews were already made, in November 2018 it was announced that new organic farming commitments cannot be made the following spring. The Minister of Agriculture and Forestry Jari Leppä explained that all the funds reserved for organic farming have been used or allocated to farms already in organic farming up to the year 2020. In addition, other subsidies were being cut as well (Holmberg, 2018).

It may be that the popularity of converting to organic farming took the government by surprise. In any case, if we as a nation want to work towards a more sustainable way of farming land and producing food, there must a better plan for the economic support offered for organic farmers. Most of the farmers interviewed for this research cannot support themselves and their families with the income from farming alone, so either both adults or one of the adults in the household works outside of the farm. This does lead to the interesting question of perceived profitability and actual profitability. Is organic farming actually more profitable than conventional farming, or is this only a perceived benefit? The main factors influencing profitability are yields, price premia and support payments for organic farmers. Nieberg & Offermann’s (2003) research in
Europe found that the profits of organic farms are very similar to comparable conventional farms, but that this varies quite a lot depending on for example country and farm type. Many of the farmers interviewed for this research said that the way to make a farm actually profitable enough to earn a living for the whole family, would be to have a big enough farm. Research shows, that farm size and cost-effectiveness influence the profitability of organic farms, just as it does the profitability of conventional farms (Nieberg & Offermann, 2003; Luke, 2017).

The profitability of farming in Finland has decreased steadily and in 2016 it reached the lowest it has been in the 2000’s: the profitability ratio decreased from 0,34 to 0,26 and the return on total capital was negative by over three per cent while the average entrepreneurial income was only 11,200 euros per farmer and per year – this means that on average, a farmer gets paid 4,1 € per hour (Luke, 2018c). In the light of these numbers, it’s no wonder many farmers are interested in converting to organic farming, where economic support is available and where the farmer can get a higher price for products if the products are chosen well and the business model is well planned.

Farming crops suitable for the specific soil type of the area or for example choosing to produce organic meat instead of crops, if your farm’s soil is better suited for that, is especially important in organic farming where you cannot use chemical fertilizers but have to work with the land that you have. In the bigger picture, it is also sensible to choose products that are easy and cost-effective to produce here in Finland, according to the specific characteristics of Finnish agriculture. Choosing the right kind of product is something that came up several times in the interviews made for this research. For example, oats are successful in Finland and there is also a good demand for Finnish organic oats abroad.

For some farmers, organic agriculture is a strategic choice. It is a way for them to stay in business and make farming more profitable. The higher price premiums and more specific target market encourage farmers to choose organic agriculture. For many organic farmers, especially ones with smaller farms, specializing in a specific niche on the market can be a way to do better business. For example, one of the farmers interviewed for this research produces organic sheep meat, which is not a very common kind of meat on the Finnish market. This farmer also sells sponsorships; the idea is, that people can sponsor a lamb and get regular updates on its growth and life on the farm. In shops, organic beef is already quite a common sight but organic chicken and pork are less common. A couple of producers have noticed this niche and are working
towards getting their organic chicken and pork into larger shops. For example, Niittylintu, a farm producing organic chicken, recently carried out a poll asking among other things in which shops consumers would like to buy their organic chicken and promised to contact every shop directly to try and get their organic chicken in the shop’s selection.

Farmers can also sell their products directly to consumers; this leaves out the big supermarkets from the supply chain and enables farmers to make higher profits. In Finland one of these direct selling channels is the Reko retail and distribution model (aitojamakuja.fi, 2019), where producers market their products in closed Facebook-groups. Consumers make their orders in these groups and then meet with the producers on a specific date and in an agreed place. Usually these meetings are held once a week or every other week. Farmers also sell their products directly from their farms. In many other countries so-called farmer’s markets are also popular.

### 6.1.2 External reasons

When it comes to environmental reasons for choosing organic production, a couple of the interviewed farmers specifically mentioned the environment and biodiversity as affecting their decision. One of the farmers said that he wants the farm to be environmentally sustainable so that the land and soil are not drained of nutrients and that there is land left to farm for future generations. Another hoped that the farm would continue to be farmed also in the future with respect to nature and the environment. Future is something that came up several times, and the importance of comprehensive sustainability. Many farms try to operate in a comprehensively sustainable way, one specifically mentioned that they want the entire business to be as ecological as possible; using organic products, using alternative sources of energy, and for example biogas fuelled cars.

Some farmers also mentioned carbon sequestration in soil, and that it will become more important in the future as an environmental benefit of organic farming. To support environmental sustainability, the farms plan their farming in a way that takes biodiversity in consideration and also utilize circular economy. One of the farmers said that as a student of agriculture and forestry, he became interested in the environmental challenges we are facing today and environmental issues in general, and he believed in the future of organic farming, which strongly affected his decision. Another farmer said that he believes that with organic farming, it is possible to slow down climate change
and increase biodiversity. Environmental sustainability is important for organic farmers; both as they're naturally connected and because environmental sustainability is needed for organic farming to be successful.

One important reason for choosing organic production is that the farmers did not want to use chemical pesticides and fertilizers. Some had very personal reasons such as a death in the family that they suspect could have been at least partly caused by these chemicals, some just want to produce cleaner food and some that have used chemicals before said that they never liked it and saw them as dangerous to use. In this resistance for using chemicals you can also see the farmers’ desire to protect the environment. Similar reasons for choosing organic farming have also been recognized in previous studies such as Lockeretz & Madden (1987) that reported health concerns, Milder et al. (1991) who mentioned healthy food and Hong (1994) who brought out bad experiences with agricultural chemicals.

Consumers also expect organic food to be natural and pollution-free (Helfter, 2003). The organic food market is very sensitive to the higher quality that consumers expect from organic products and the reputation of organic products can easily be tarnished by for example chemical contamination of organic products. Food safety has been defined as including products being GMO-free, non-toxic and clean as well as produced with no hormones, chemical pesticides or additives, and the control of organic production being reliable; food safety is also the most significant reason for consumers in choosing organic products (Nuutila, 2011). Healthier food therefore seems to be important both for producers and consumers and is a clear advantage of organic food.

The sustainability of organic farming needs more research but based on the research that we do have, organic agriculture is more profitable and environmentally friendly as well as produces equally or more nutritious food compared to conventional farming (Reganold & Wachter, 2016) and therefore we can assume that organic farming, or a combination of organic farming and conventional farming systems, is more sustainable than conventional farming. Following profitability and healthier food production, the next most popular reason in this research for choosing organic production was sustainability. Four out of the nine interviewed farmers specifically mention sustainability as a term; the rest of the interviewees also mention at least some of the dimensions of sustainability as reasons for choosing organic production. Sustainability is such a broad term, that it might not be the first thing that comes to mind when farmers are asked about their reasons for choosing organic production. What is more
important is to identify the dimensions of sustainability in their responses. For the farmers that did specifically mention sustainability as a reason for choosing organic farming, it was a familiar term and they had obviously given sustainability as a concept a lot of thought.

The dimensions of sustainability identified in this research all came up in the interviews with the organic farmers: economic, environmental, social and cultural sustainability as well as time. It may be difficult to distinguish between different dimensions of sustainability as separate reasons for choosing organic farming. For example, farmers look at sustainability as something that ensures livelihood from farming for future generations to come and the viability and profitability of the farm in the long run. This reason incorporates both time (e.g. the future and how farming can be viable in the future) and economic sustainability (e.g. how to make it economically sustainable and possible to keep farming their land). Eyhorn's 2007 study found similar reasons for converting to organic farming in India, where farmers did not have much confidence in the economic viability of conventional farming and by converting to organic farming, wanted to ensure a better future for their farms (Eyhorn, 2007).

Through the better profitability of organic farming and the goal of having productive land to farm that yields enough crops for future generations, the dimension of economic sustainability becomes apparent. This is the biggest single reason for choosing organic farming among the farmers interviewed for this research. As farming becomes more and more financially unsure and economically unsustainable, farmers have had to make choices to secure the continuity of their livelihood. The higher prices of organic products have been a strong incentive for choosing organic farming. Economic reasons for choosing organic farming may be a major factor especially in areas going through some kind of agricultural crisis or that are difficult to farm or less profitable (Rigby & Cáceres, 2001). Economic reasons can also be a strong incentive to convert to organic farming if the individual farm has very low profitability. It appears that, over all, economic reasons have been the initial push towards organic farming, but sustainability in the wider sense is something that organic producers have recognized in their work later on.

The relationship between sustainability and organic farming seems to become more clear after farming organically for some time. It could be said that sustainability and organic farming intertwine in a way of life where farmers do not necessarily think about sustainability as a concept on a daily basis, but because of the way they farm land, it is
something that comes naturally as a ‘side effect’ of the farming technique. Converting to organic farming has also made many farmers more aware of sustainability and environmental issues. They have noticed the importance of biodiversity in soil health, for example. Some also state that they consume more organic food than before and prefer organically produced food.

6.1.3 Internal reasons

Whereas before many people were often forced to farm land just as the generations before them, nowadays – at least in theory – most farmers have a choice. People value meaningfulness and emotional satisfaction in their work and want to feel motivated in what they do. This is also true with farmers. Organic farming requires specific skills and knowledge to be successful and according to the interviewees it is necessary to know your land and the type of soil in order to make good choices about which crops to farm and how. The farmers are eager to learn more about organic farming techniques and the ones that specified meaningfulness as a reason for choosing organic farming, said the meaningfulness of organic farming includes learning to farm their land better. Also having such a big role in the results of your work and seeing progress are things that contribute to the meaningfulness of organic farming, and meaningfulness leads to better motivation.

Already in the 1980’s ideological reasons were found to be the main motivation for choosing organic farming in a research in Ireland (Wilier & Gillmore, 1992). Two of the nine interviewed farmers strongly stated that organic farming was the only possible choice for them from the start because of ideological reasons. Ideological reasons have often been regarded as negative, but combined with practical reasons and a realistic approach to organic farming, ideology can make a farmer even more committed to their choice of way to farm land and act as an incentive to develop the farmer’s chosen farming method. There has been some discussion of ideology versus science and the viability of organic agriculture has been questioned (Trewavas, 2001) but I believe that ideology and science do not have to rule each other out, but that they can be combined in a productive way.

It seems that even for the farmers for whom organic farming was not an ideological choice to start off, producing and consuming organic food and supporting sustainability through organic farming has become a way of life and developed into an ideology. This ideology includes the importance of biodiversity and environmental sustainability.
Through organic farming, farmers believe that they can improve biodiversity and protect the environment. They believe these are issues that cannot be overlooked and should be taken in consideration in all farming. There are actually for example many farming techniques in organic farming that conventional farming could take in use and in this way be more environmentally friendly and sustainable.

One farmer that participated in this research said that when he used to farm in the conventional way, he hated going out at night to spread the chemical pesticides and remembered all the protective gear that he had to wear for the procedure. He said that made him think if the farming of these crops was so dangerous, why would he eat the food that comes out of the poisoned land? A couple of the farmers also strongly stated that they did not want to support the large agrochemical corporations that manufacture these chemicals. They feel that the large corporations hold small farmers in a tight grip and influence their business and profitability too much through the pricing of the chemicals. And since there are only a couple of large corporations that control the market, they can also control the prices. Farmers may feel helpless in a situation like this and want to feel more independent from them. The lower production costs of organic farming, that contribute to the better profitability, are in part a result of savings in the costs of chemical fertilizers (Luke, 2017). The farmers stated that they want independence from large agricultural corporations. Still, in a study in the late 1990’s it was found that both organic and conventional farmers saw independence as the main benefit of farming (Sullivan et al., 1996).

There seems to be quite a lot of apprehension among the interviewed farmers towards large agrochemical and agricultural corporations. The farmers interviewed for this research felt that conventional farmers are dependent on the large agrochemical and agricultural corporations because of the chemicals used in farming such as fertilizers and pesticides and can therefore dictate the price level. This puts farmers in a difficult situation. A couple of the interviewed farmers specifically mention independence from these corporations as a reason for choosing organic farming. A part of why organic farming can be more meaningful and motivating is independence from the large chemical corporations and the responsibility of the farmer alone to develop a productive farm. A higher level of satisfaction has been identified as one of the benefits of organic farming (Sullivan et al., 1996).
6.2 Organic farmers and sustainability

6.2.1 The development of the perception of sustainability

Four of the nine interviewed farmers identify sustainability as something that affected their decision to convert to organic farming. Almost all, 8 out of the 9 farmers, said that organic farming has resulted in them viewing sustainability in a larger perspective and taking sustainability more in consideration in their work and that they consider the environment and biodiversity in their farming. It seems that although organic farming has been recognized as the more sustainable option among the farmers that participated in this research, the farmers’ perception of sustainability has developed to encompass more dimensions than the traditional ‘triple bottom line’ of economic, environmental and social sustainability. A couple of the farmers said that when they were farming the conventional way, they did not really think about sustainability, but as organic farmers, sustainability is in the centre of their work. The interviews show that sustainability promotes organic farming and vice versa.

Based on the interviews, many of the farmers’ perception of sustainability and own actions regarding sustainable consumption for example have changed after they’ve adopted organic farming methods. Many buy more organic food than they used to and try to consume food that is produced in Finland. They believe that Finnish food, especially organic, is safer and of better quality than some foods produced abroad and in this, they share their trust in Finnish food quality and safety with 86 % of Finnish consumers (MTK, 2018). Finland and the EU have tight controls over organic production. The EU sets rules for organic production and every EU country has the obligation to enforce those rules and to make sure they are followed, as well as report to the European Commission yearly (European Commission, n.d.).

Farmers strive to a clean, healthy and vital environment (MTK, 2018), but some farmers have doubts about organic farming and its environmental impacts; after all, farmers have to use machines that use fuel and contribute to pollution, for example. Often farmers also have to drive long distances to get to their fields. Animal feed and manure for fertilizer is shipped around Finland to satisfy the needs of different farms. Products are transported in small shipments. Some of the ways the farmers said that organic farming could be made more environmentally friendly would be to make the logistics of farming more sensible: have fields as close to the farm as possible, share machinery with other farmers, encourage farming crops and producing animal
products on the same farm or in close proximity of each and share transports of goods among several farmers, which would also make it easier to save on logistics costs. Organic farming also has its challenges in improving nutrient management and crop yields, even if, in general, the environmental impact of organic farming is lower than that of conventional farming (Tuomisto et al., 2012).

These doubts show that farmers try to evaluate the sustainability of their farming from an objective perspective. They also take action in trying to farm in a more sustainable way and do not only follow the minimum requirements of organic farming. Using sustainable ways of farming can also help make their work more effective. When training and workshops on organic farming are arranged for farmers converting to organic farming, it would be useful to go through ways in which the farmers can use their resources as effectively and sustainably as possible in their farming. Successful organic farmers could share their stories as case examples in open events. So-called pioneer organic producers, that have successful and well-established organic production, can help support the conversion to organic production (Risgaard et al., 2007). These events would also give the newly starting organic farmers a public forum in which to ask questions and maybe get some important insight in organic farming as well as an opportunity to network. It is important for organic farmers to belong to a network, through which they can get for example production and marketing information ( Wiegel, 2009) – also just being part of a network of like-minded people is a source of support.

Farmers naturally have a very hands-on practical approach to sustainability and an expert view on how organic farming supports sustainable agriculture. Through their work as organic farmers they have become experts in planning ways to make organic farming even more sustainable. After converting to organic farming, the farmers have developed a comprehensive perception of sustainability. Organic farming is not just farming in a way that is environmentally friendly, which is something that it is often meant when talking about sustainability. Organic farming has very recognizable connections to the other dimensions of sustainability as well.

As mentioned before, converting to organic farming has strengthened the farmers’ commitment to sustainability. They are constantly coming up with ways to make farming more sustainable, which will also enable them to use resources as effectively as possible. Almost all of the farmers (8 out of 9) said that they feel that they are taking the environment and biodiversity in account in their production. Organic farming
enables for example circular economy such as using animal manure and animal waste as fertilizers and soil improvers. Many organic farmers have realised the benefits of circular economy and actively use circular economy in their farming. The interviewed farmers have also developed their business and expanded to other areas, such as bioenergy, a wood chip heating plant and a biogas plant, cultural events, and different educational programs. One farmer described sustainability in their farming as considering the farm in context and time and not thinking only about optimizing productivity in the present.

Figure 9  Example of circular economy in organic production: Palopuro agroecological symbiosis (University of Helsinki, n.d.).

There is room for more co-operation among farmers, food producers and other actors that can benefit from each other while supporting sustainability. One such example in Finland is the Palopuro agroecological symbiosis, that is a cooperative food production system based on organic production, bioenergy and recycled nutrients and that strives to be energy and nutrient self-sufficient (Palopuron symbiosi, n.d.). This cooperative was developed together with the University of Helsinki’s Department of Agricultural Sciences and Natural Resources Institute Finland, which shows that there is willingness
to develop innovative systems like this, that will support and promote sustainability. This would of course require some more research, but also the farmers interviewed for this research brought up the need to evaluate and improve the sustainability of farming, which can be seen as a result of their perception of sustainability developing and maturing after their conversion to organic farming.

Converting to organic farming has also made the farmers more aware of their own consumption choices and lifestyle. Based on this, we can conclude that maybe a better knowledge of organic farming could persuade other farmers to convert to organic farming and by educating the public about organic food, we could increase the consumption of organically produced food. It is when the consumer has to make the choice between conventionally produced food and organic food, that they can be helped in making an informed decision if they have enough knowledge on which to base that choice. In the Becker et al. (2015) study, it was found that the primary reason for consumers to choose organically produced tomatoes was environmental concerns with taste and price being secondary reasons.

Organic food and organic production tend to stir up quite a conversation and often what happens is that we end up in a biased, confrontational situation which is of no use. This is why unbiased, rational and objective information on organic food would be the most credible tool to support the consumption of organic food. Credibility is actually something that a couple of farmers mentioned, saying that organic production needs credibility; it needs to be a credible option for conventional farmers that are considering converting to organic production and to consumers that are choosing between conventionally and organically produced food.

6.2.2 How sustainability is reflected in organic farming

Many of the interviewed farmers said that their life as organic farmers is completely different now than when they were conventional farmers. Many things are more complicated with the farming techniques and organic production regulations, but on the other hand they feel that their work is now more rewarding in many ways. As was described in the Results—chapter, sustainability and organic farming for the interviewed farmers go hand in hand.

Based on previous studies, introduced in the theoretical framework, and the result of this research, economic sustainability and the better (perceived or actual) profitability
seem to be the main reasons for choosing organic production. The better price of organic products and government subsidies persuade farmers to convert to organic farming, and the majority of new organic farmers are ones that have previously been conventional farmers, rather than people that have not been farmers before (Vuolteenaho, 2018). One of the big factors enabling the better profitability and economic viability of organic farming is the government support paid out to organic farmers together with the general agricultural subsidies, which is why it is essential to invest in the economic support of organic farmers. Because it is generally speaking economically difficult to be a farmer, it should not come as a surprise that economic sustainability was the most important reason for choosing organic farming.

Also, more than half of the interviewed farmers felt that the economic sustainability of organic farming is better than that of conventional farming. However, it should be noted that even though the farms in this research were generally larger than the average farm size in Finland – which could support the possibility of them being more profitable than smaller farms – almost all of the farmers had to also do something else in addition to the actual farming or food production, in order to make a living. Other work that they do was both something that was closely related to organic production, such as keeping a shop on the farm that sells the products directly to consumers, or something unrelated such as snow removal services. This shows that most of the farmers cannot survive on farming alone. Which leads us to wonder, how many other professions there are that require long working hours, often seven days a week, and hard physical labour but do not pay enough salary to live off.

Sustainability for the farmers interviewed for this research includes farming in a way that natural resources are not overused and that biodiversity is protected so that farming the land in the future will also be possible and rational. Whether organic farming is actually more environmentally-friendly than conventional farming has been debated widely, and also depends on how you measure the environmental impact of farming. A meta-analysis of published studies showed that per unit of area, organic farming had a positive effect on the environment but that per product unit this was not as clear-cut (Tuomisto et al., 2012). Many farmers try to minimize the environmental impact of farming, some being more passionate about sustainability than others, but it of course cannot be completely eliminated with reasonable effort. In any case, eight of the interviewed farmers felt that they take the environment and biodiversity in consideration in their farming and these issues were important for them. Also, five of
the farmers mention that one of the reasons why they converted to organic farming was that they did not want to use chemical fertilizers or pesticides in their work anymore and two identified environmental reasons and the will to support and promote biodiversity as a reason to choose organic farming. There is a growing apprehension towards using chemicals and an interest to organic farming techniques also among conventional farmers (Vuolteenaho, 2018).

It was interesting to notice how many farmers use circular economy and are involved in for example bioenergy production. The farmers are also very knowledgeable about the current development of sustainable production and farming methods and are quite technology-oriented and ready to use new technologies and modern techniques in farming. Organic farmers often show concern for an ethical way of living and feel a need to live in harmony with nature (Sullivan et al., 1996). From the interviews it was apparent that the organic farmers had big respect for nature and view nature as almost a separate living being – a couple of the farmers described their relationship with nature being the kind where the farmers are at the mercy of nature and that they have to cooperate with nature in order to obtain good and lasting results in farming. Also, when you cannot use chemical pesticides or fertilizers, it is important to farm in a way that keeps the soil healthy and suitable for farming. Biodiversity is one factor that affects the soil – different animals for example are needed to keep the soil in good condition for farming.

Organic farmers have a strong sense of community (Sullivan et al., 1996), which also the farmers interviewed for this research expressed. They also said that they have both informal and formal networks of organic farmers and this is important to them, as farmers want to belong to a formal or informal network of people in the same trade (Wiegel, 2009). The farmers especially find the support and cooperation between other organic farmers very important and it seems that they have a very strong feeling of togetherness and swap ideas and tips among each other a lot. 5 out of 9 farmers also cooperate with other organic farmers in practice, and do some of the work on their farms together. Some farmers mention that an even closer cooperation might be a good idea; this way not every farmer would need to buy very expensive machinery but they could divide work so that they could get the most use out of everyone’s resources. Maybe the strong community among organic farmers has formed partly as a reaction to how organic farmers were previously viewed as the strange ones among farmers in general – before, conventional farmers may not have had much belief in organic
farming and some looked down on organic farmers. A few of the interviewed farmers said that now, the attitudes towards organic farming have been changing; also convention farmers can now see that it actually is a real option and a viable way of farming.

The surrounding community is important for the interviewed farmers and they see themselves as part of it, as their family has often resided in the same area and on the same farm for many generations. Especially farmers with larger farms are often well-known and respected members of their local community. There is a long history that the farmers are proud of and that they value. They want to do their part in supporting the local community and support social sustainability. It is quite common to for example hire local ‘handymen’ or for example students to do work on the farm or try to employ workforce from nearby. Organic farming can generate more employment in rural areas than conventional farming (El-Hage Scialabba, 2013), as it is more labour-intensive. Based on the importance of community for organic farmers, it really could work as an incentive to convert to organic farming if networking was made easy and so-called pioneer organic farmers were involved.

The interviewed farmers saw culture as an important aspect of sustainability and farming. One farmer said that their work is agriculture, emphasizing the word ‘culture’, which in itself incorporates culture in farming. A few farmers call what they do environmental culture. 2/3 of the farmers think that they support cultural sustainability or produce culture themselves by for example arranging cultural events such as theatre nights and providing workspaces for artists. For farmers, the landscape is a source of satisfaction and the rural scenery with for example grazing livestock is an important part of the cultural landscape. They hope to maintain and preserve the Finnish rural landscape. Some feel it is a shame that we do not have so many grazing animals in Southern Finland anymore as meat production has concentrated more in the northwest. One farmer said that he had deliberately made the cows’ pastures close to the road so that people driving by could see them grazing.

Farmers renovate buildings in a way that respects the old appearance of them. One farmer that has renovated an old barn for a large space that is rented out for parties and events, said that he wanted to preserve the old look of it because “People would be disappointed if it did not look like an old barn”. One farmer offers ‘old-style Christmas tree sales’ where the people that buy a Christmas tree can go get it themselves from the forest with a horse and sleigh. What is noteworthy is that some farms included in this
research, as well as many others that are not subjects of this research, have combined organic farming and culture for example by organizing different cultural events such as concerts or theatre nights, or providing space for artists to work, holding art exhibitions and many other things to incorporate organic farming and culture. There is also tourism on some of the farms while a couple of the others are planning to expand to tourism, and visitors are told about the farm’s and the community’s history, in this way keeping cultural history alive. All this both preserves and promotes culture while at the same time provides farmers with new sources of income.

Throughout the interviews, the main connecting theme in sustainability and organic farming was time. Time is one of the newer dimensions of sustainability (Seghezzo, 2009; Bansal & DesJardine, 2014; Kohl, 2016) and in fact it ties together and is a part of all the other dimensions of sustainability. The farmers interviewed for this research felt that by choosing organic farming, they farm in a more sustainable way so that their land can be farmed in the future by their children and the following generations and also in the bigger picture, so that we can have sustainable farming and food production in Finland in the future. How time as a dimension of sustainability shows in organic farmers’ work is for example how organic farmers need to plan their farming many years in advance. Usually, organic farming uses a five-year crop rotation system, where a clover grass mixture that binds nitrogen to the soil and prevents weed formation is used for two years, then crops for two years and a pulse crop for a year (Vuolteenaho, 2018). In organic farming, it might take years to see results or to reach your farming goals, so it requires patience. The farmers worry about their farm surviving for future generations, as well as the future of farming and food production in general, and that’s why they want to promote sustainable agriculture as much as they can. One of the farmers said it well: he said that he looks at his farm in the context of time and space and that his timespan for planning and sustainable farming is hundreds of years, not tens of years.

The fact that organic farming requires so much planning and patience, and is in no means easy in other ways either, might deter some prospective new organic farmers. Organic farming has been said to be a big puzzle where solid workmanship makes a successful farm (Pro Luomu, 2017). Especially the first few years, the transition period when products are not yet certified organic even though they have to be farmed organically, can be daunting for some because of the lower profitability of that time span. Also, when converting to organic farming, it takes some years for the soil to ‘heal’
and reach its fertility, and it takes time for the farmer to learn to best technique, which means that crop yields can be somewhat lower in the beginning. Maybe there could be a way to make the transition period easier, and in the beginning have knowledgeable advisors helping the new farmer choose the best crops or animal production for his land and teach organic farming techniques.

6.3 A few words on politics

There were a couple of interviewed farmers that, very interestingly, presented opposite views on the Finnish government’s goal of increasing the organically farmed area to 20 percent by the year 2020. One of them wondered why the goal is so low; why not just aim for 100 percent right away – while the other was of the opinion that 30 percent would be enough and was worried that if organic food becomes the new norm, would farmers be able to get a higher price for the products, as they have done now, and what would happen to the better profitability of organic farming? Even so, the general attitudes towards the Finnish government’s goal to increase organic farming were positive, as was the farmers’ attitudes towards increasing the consumption and market demand of organic food. However, we are not going to reach the goal of 20 % organically farmed land, and the government has already run out of support money for farmers; we need an improved plan on how to promote organic farming in Finland.

In order to increase production, we of course need to increase demand. That’s why Finland also aims to diversify the organic product range to meet consumer demand and, what is very important, use more organic food and products in public food services such as schools. For example, the University of Helsinki and the City of Helsinki are decreasing the amount of beef that they will be serving in public food services such as schools in order to reduce climate emissions (Mäkelä, 2019). This is in not necessarily a bad decision, but the decision’s effect on climate emissions may be debatable and shall be seen after a while, if (and hopefully) the effects are studied. Also, they will probably be replacing some of the beef with broiler and turkey meat – could we instead decrease the amount of meat used in public food service altogether? What about supporting the Finnish government’s goals and using more organic food?

In professional kitchens, organic meat and meat products are used least, while the most used organic products are cereal, milk products and vegetables (Luomu.fi, n.d.). Maybe organic meat production should be increased in Finland, which could lead to somewhat lower prices and affordability; still making sure that the producer gets a fair
compensation for the product. Producers could even sell their products directly to professional kitchens and public food service, and it might be easier to sell products in larger batches. The newspaper Aamulehti (Happonen, 2017) has reported that there is very little production of organic broiler in Finland – only a couple of hundred tons in a year, while non-organic broiler meat is produced 117 million kilograms per year. Finnish consumers eat more chicken than ever, but have not yet been ready to pay a higher price for organic broiler, which is a result of production costs, that can be up to three times higher in organic broiler production (Happonen, 2017). There are only a few organic broiler producers in Finland. Maybe government economic support could be directed more to organic broiler producers, which could be one way to increase production. After all, one of the government’s goals is to diversify the organic product range.

The national objective of increasing the organically farmed area in Finland to 20 % is not going to be reached. A few interviewed farmers also voiced their concern about this and about how the Finnish government thought to reach this goal and afford it, if the goal was reached. Although in general, the goal to increase organic production is a positive one for the farmers, they are not without worry. Many of the interviewed farmers had some very interesting insights on politics, and some are involved in different kinds of research and development of the agricultural sector. The farmers would wish that their voice was heard in the policy making process, already in the first phases, so that they could have the opportunity to influence the policies concerning the agricultural sector. Some feel that their view of the practical life of farmers would be useful in the decision-making process.

6.4 Suggestions for sustainable organic farming in the future

The farmers have faith in the future of organic production; seven of the nine interviewed farmers believe that organic production will grow in the future and the market for organic products is good – both consumers and producers have a positive attitude towards organic production. Even though the farmers interviewed for this research are not planning on going back to conventional farming and are in general satisfied with their choice of organic farming, many useful insights to what to improve in organic production, policies and political decision making in the future came up. Organic producers have a lot of knowledge and expertise, that should be utilized and
not wasted. In this chapter, I will identify some things to consider, that the farmers themselves brought up.

Farmers could be involved in the political decision making and planning process through so-called farmer’s councils – after all, the best knowledge of the field comes from the farmers themselves. The United Nations states in a brief on sustainable agriculture, that “Farmers --- and other local entrepreneurs must be central to the planning of any new solution” (United Nations, 2015b, p.2). In discussions with farmers it was apparent that many were interested in being a part of the political process and would happily share their expertise in the planning of new and better ways to increase the area of organically farmed land in Finland in a sustainable way.

To farm land successfully according to the guidelines of organic farming, the farmer needs quite a lot of knowledge and skill in farming techniques as well as with the paperwork that comes with organic farming. Also, how the organic farming guidelines are controlled and supervised, is not always uniform or equal but can depend on the supervisor. All the bureaucracy and paperwork also leads to a lot of extra work for farmers. After farming in the conventional way, converting to organic farming poses many challenges, of which learning the right farming technique is one of the most time-consuming ones. It may be that it takes years to learn, through trial and error, which technique and which crops suit the soil of that specific farm best. Different parties involved in organic farming in Finland, such as the Finnish Organic Research Institute and the Finnish Organic Association and many others, organize training and give advice on organic farming techniques. Crop rotation, mechanical cultivation and weed control for example are important factors and basic requirements in organic farming. Also, some crops are better suited for organic farming than others.

Many of the farmers said that the training that they had when converting to organic farming was very useful for them even though the practical learning takes years before you can say that you have good knowledge and skill. The Finnish expert organization for rural entrepreneurs ProAgria and different organizations that promote organic farming arrange training, workshops, lectures and other events for farmers that are converting to organic farming as well as others interested in the subject. However, there was some uncertainty among the interviewed farmers about whether there was any free individual consultation available for organic farmers. This is something that could be improved, maybe a kind of peer support network could be possible, where both farmers and experts could volunteer their time for individual consultation.
Organic farmers have Facebook groups, which can be seen as sort of an unofficial network where farmers can ask for advice. The interviewed farmers felt that they had gotten a lot of support and advice from other organic producers – farmers that had been in organic farming for a longer time already. There really is quite an overwhelming sense of community among organic farmers. For some farmers, the support of other farmers can even be a motivation to convert to organic farming and makes the transition easier, as you can ask for advice and learn from your peer farmers (Porter et al., 2010).

Some farmers expressed frustration about the lack of skilled employees with knowledge on organic farming techniques or that would have interest in learning. This can leave the farmers feeling somewhat alone with a big work load and can even block or slow down the growth of organic farms. On the other hand, farm work is often very seasonal, and cannot always provide work all year round. The farmers interviewed for this research often hire seasonal workers for their farms and try to hire local employees as much as they can, thus contributing to the social aspect of sustainability. Some also still have their parents or other family members helping out with some of the seasonal work. Many farms are very much family businesses and a way of life. It would be useful to find a way to easily employ local workforce, also seasonally – maybe for example some kind of co-operation with educational institutions would help both with the labour needs as well as in educating students about organic production.

The interviewed farmers also emphasize the importance of research and product development in organic production. New kinds of crops, that fit organic production and improve the quality, disease resistance, productivity, genetic diversity and other attributes of organic crops are goals in organic plant breeding (Rajala, 2011). Research on organic production is carried out on several different fields of science and research sectors. There are about 80 employees in the Natural resources institute of Finland that work on organic research either full-time or part-time. Scientific data is needed to support the decision-making regarding organic production (Luke, n.d.). In addition to using scientific data in decision-making, a couple of the interviewed farmers said that they wish organic farmers would be included already in the planning phase when new guidelines or policies regarding organic farming are designed, rather than coming up with rules and then imposing them on farmers. Farmers can sometimes feel that rules and guidelines are dictated to them without taking into account the expertise of the farmers, which could help generate policies that are more useful and realizable. A
couple of the farmers also thought that some EU guidelines or policies are not suitable for Finland at all.

Market research is also important to determine what products are in demand on the market. The farmers felt that in general, consumers have a very positive attitude towards organic food and are interested in consuming more organic food. Many of the farmers specifically mentioned, that Finnish organic oats are very popular abroad and that oats are also a crop that is relatively easy to farm organically in Finland. The demand for Finnish-grown organic crops, and also gluten-free, has grown steadily (Pro Luomu, 2017). Market research in Finland is carried out by for example Pro Luomu and the Finnish Organic Research Institute.

Farmers believe that the consumption and demand for organic products is going to increase and that Finland could export a lot more organic products than is exported now. China for example is a rapidly growing market for Finnish organic products. We could also increase the consumption of organic food in Finland through using more organic products in the public sector such as schools and hospitals. There is not enough organic production yet to make organic food the new norm in for example professional kitchens. Also, there are certain products that are in high demand such as organic fruit and vegetables; we should strive to increase the production of these products. Organic research and improving crop species will help increase organic production. However, some of the farmers also warned that it is not sustainable in the long run to only farm crops that are popular at the moment, and nutritious crops that are suitable for the specific area and soil type should not be overlooked.

Direct selling means farmers selling their products directly to the end-user, be it a consumer or an organization. The previously mentioned Reko food network is direct selling to consumers and in addition to these kinds of networks, products are also sold directly from farms – several of the farmers in this research have small farm shops where they sell their products and also products from other farms and partners. Farmers also sell their products directly to organizations, such as wholesale markets and professional kitchens. The problem is that the profitability of organic production is often lost because of high logistics expenses, as small quantities of products are shipped. It would be more ecological and economical for farmers to co-operate and share the logistics costs (Haaga-Helia University of Applied Sciences, 2018). The farmers also brought up other opportunities for co-operation with other farmers: for example, small farming communities, where the needed very expensive machinery
could be jointly owned and the farming work could be done in co-operation with others, saving both costs of property and work.

Another thing about logistics that came up in the interviews is that it is not ecological or economical to ship animal manure from the Ostrobothnia region to Southern Finland and animal feed (crops) from Southern Finland to Ostrobothnia. However, the current policies for national agricultural economical support has created this situation, because it is more profitable to produce for example milk in Ostrobothnia than it is in Southern Finland and more profitable to produce crops in Southern Finland than milk. For example, over half of the reserved national support in the Northern part of Finland (Ostrobothnia included) are paid out to support milk production, whereas most of the benefits in Southern Finland are paid out to poultry and pork production and garden products (Finnish Government, 2019). A couple of the interviewed farmers pointed out that it would actually be more beneficial to produce both crops, fruits, vegetables and/or garden products and animal products on the same farm – that way the crops that cannot be sold to human consumption could be used as feed for the animals and the animal manure could be used as a natural fertilizer and soil improver in crop production. However, there are reasons why the benefits are divided like this and these politics are also partly dictated by the EU, so it is a long road to change this and careful research and consideration should be carried out before in any case, to determine what would be more beneficial in the larger picture.
7 CONCLUSION

The aim of this research was to find out what the main reasons for choosing organic production are for Finnish farmers and how sustainability has affected their choice as well as explore farmers’ perceptions of sustainability and how these are reflected in organic farming. The research questions were studied with the overarching theme of sustainability and the relationship between sustainable development and organic farming. This was a qualitative, exploratory research, where the data was collected through semi-structured interviews. The results were analysed using thematic narrative analysis. Based on the results, a new framework for sustainability in organic farming was proposed. This study can act as a basis and incentive for further research and can contribute to the organizational view of organic farming and propose ways in which we can support farmers in converting to organic farming and hence increase organic production in Finland.

By reviewing previous literature, a theoretical framework was established around the studied subject. First, it was important to introduce some definitions of sustainability and sustainable development. After this, we had a look at agriculture in relation to sustainable development as well as explored how sustainability relates to organic farming. Next, some characteristics and differences of conventional and organic farming were identified – the two main ways of practicing agriculture in Finland are conventional farming and organic farming and these two differ from each other in some clear aspects and this is why these two were compared. This section ended with familiarising ourselves on previous literature on converting to organic farming, to determine what reasons have been found for conversion in the past.

In a separate section, we looked at the current situation of organic production in Finland and the national policies on agriculture and sustainable development in Finland to establish the political and societal framework in which organic farmers work. Policies for economic support play an important role in organic farming both through affecting the farmers’ decision to choose organic farming and in the economic sustainability of the farms. Since organic producers are a part of the production chain in Finland, the overall situation of the organic market was also described. This section ended with discussing some problems and issues in increasing the growth of organic food production.
In the literature review, we described the triple bottom line of sustainability introduced by John Elkington in 1994: profit, people and planet – and that has also been termed economic, social and environmental sustainability. Recently, a couple of dimensions have been added to this list; these are cultural sustainability and time. In the interviews, all of these five dimensions of sustainability could be identified in the narratives. In the farmers’ perception of sustainability, time was a dimension of sustainability that interacts with all the other identified dimensions: economic, environmental, social and cultural sustainability. Time is a part of all the other dimensions of sustainability. Already in the Brundtland report (United Nations, 1987), sustainability was defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs, where the future can be seen as representing the time dimension of sustainability. Organic production has been shown in many studies to contribute positively to sustainability and sustainable development.

The sustainability of organic farming has been debated and is difficult to define in any case, but we can conclude that organic farming aims to be a more sustainable way of agriculture, and even though organic farming has its drawbacks for example in temporarily lower crop yields, many emphasize the sustainability of organic farming in the long run (Leifeld, 2012). In this research it was clear that organic farmers consider sustainability in their farming and it is something that they give a lot of thought to. A little less than half of the farmers identified sustainability as a reason for them to have chosen organic farming. However, it seems that in many cases sustainability has become more important to farmers only after the conversion or decision to choose organic farming. It can be said that organic farming has made farmers view sustainability in a wider context and has made them incorporate values of sustainability in their life and work. In a sense, sustainability encourages organic farming and organic farming supports sustainability.

The main difference between conventional and organic farming is that organic farming aims to be a more sustainable way of agriculture, and it is more heavily controlled and regulated than conventional farming. The use of chemical fertilizers or pesticides and for example GMO’s and radiation are prohibited in organic farming (Nuutila, 2016). The farmers interviewed for this research as well as consumers according to previous research believe that organic food is safer and cleaner and that is important for them, food safety being a significant reason for consumers in choosing organic products.
Many studies have found that the crop yields in organic farming are lower than in conventional farming, but on the other hand, also production costs are lower and prices of products are higher – these factors together with the organic production subsidies that are paid out to organic producers in addition to other agricultural subsidies, affect the overall better profitability of organic farming (Luke, 2017). Although there has been debate on the actual environmental sustainability of organic farming, organic farmers believe that they take the environment in consideration in their farming and support biodiversity and soil health. There is of course some doubt about the environmental friendliness of any kind of agriculture, but organic farming aims to be a more sustainable way of producing food and surely in the future, as techniques develop and knowledge increases, we will be able to improve the environmental sustainability of agriculture.

Studies have found a range of reasons for converting to organic farming, which vary between countries and regions and the different environments in which farmers work – as Gliessman and Rosemeyer (2010) put it, the conversion to organic farming happens in a social, cultural and economic context. Reasons for converting to organic farming include economic viability and sustainability of the management of the production base and livelihood security (Eyhorn, 2007), ideological reasons (Wilier & Gillmore, 1992), environmental motivations (Dubgaard & Sorensen, 1988), food quality and healthy food (Kvist, 1994; Milder et al., 1991) as well as health concerns and negative experiences with agricultural chemicals (Lockeretz & Madden, 1987; Hong, 1994). All of these reasons were also found to be reasons for converting to organic production in this research.

As in previous research (Rigby & Cáceres, 2001), also this research found that economic reasons were the main reason for choosing organic production; whether the farmer had converted to organic farming or chosen organic farming from the beginning. Mainly it was the better profitability of organic farming that affected their choice, and when reviewing literature, we found that previous research has suggested that the economic efficiency of organic farming is better compared to conventional farming (Vasile et al., 2015). The organic farming subsidies paid out to organic farmers in Finland form a large part of the better profitability of organic farming, in addition to the slightly higher market prices of organic products. Organic farming is also more economically viable and offers a more secure livelihood to farmers in Finland, just as has been noted elsewhere (Eyhorn, 2007). According to this research, the organic farming subsidies are
very important for the farmers’ income in Finland. In previous research, reasons for choosing organic farming also include monetary support for new organic farms (Kvist, 1994) and economic incentives (Bruckmeier et al, 1994) – economic support is an important incentive for choosing organic farming and as a way to increase organic production, it can therefore not be overlooked. Two out of nine farmers said that choosing organic production was a strategic business choice for them.

Avoiding chemicals, food safety and health concerns were actually the second most popular reason for choosing organic production according to this research, after economic reasons. Many of the farmers have a very negative attitude towards using chemicals in farming and call them ‘poisons’. Some had bad experiences with using chemical before and even connected using chemicals to serious health concerns. Some feel that one of the clear advantages of organic food is better food quality and food safety, and the prerequisite for this is avoiding the use of chemicals. Indeed, food safety has been found to be a significant reason for consumers in choosing organic products (Nuutila, 2011).

Avoiding chemicals connects to a couple of other reasons the farmers had for choosing organic production: meaningfulness, motivation and ideology that were mentioned by four out nine farmers as reasons for choosing organic production, and independence that was mentioned by two. Organic farming is a choice that fits their ideology and way of life and independence specifically means being independent from large agrochemical corporations as they do not use chemicals anymore. The farmers said that not using chemicals makes farming more meaningful for them; it’s up to them to make the land productive and they cannot ‘cheat’ by using chemicals. They also said that organic farming increases their motivation as they can see the results of their own work and they need to know their soil type and how to farm it in the right way, which crops to choose or if raising beef cattle for example would fit the type of soil better – they make decisions and then see the consequences, learn and work together with nature. Two out of nine producers specifically mentioned the environment and biodiversity as reasons for choosing organic production.

Organic production in Finland has grown rapidly in the last years, with for example between the years 2012-2017 the organically farmed area increasing by 30.8 % (Eurostat, 2017a). In the EU, growth has been similarly rapid with the organically farmed area growing from 5.0 million hectares in 2002 to 11.1 million hectares in 2015 (European Commission, 2016). There is enormous market potential for organic food
both in Finland and in Europe in general, and consumer demand is also on the rise. In Finland, the national objective has been to increase the organically farmed area to 20 % in 2020—a goal that is not going to be met, but that has probably had a positive impact on organic farming with more producers converting to organic farming. The Ministry of Agriculture and Forestry in Finland also aims to diversify the range of organic products on the market as well as increase the use of organic products in professional kitchens (Ministry of Agriculture and Forestry, 2014). Unfortunately, as the Finnish government ran out of funds, starting from spring 2019 new organic commitments have not been made (Holmberg, 2018). The situation is probably going to change in the next term that starts in 2020, but there is still concern among farmers about how the government is going to afford paying out subsidies for organic farmers with the amount of organic farmers steadily increasing. Indeed, to reach the national goals for sustainable development and organic farming, many changes have to be made starting from a comprehensive change in the Finnish food chain to involving the government through legislation, taxation and information (Nuutila & Kurppa, 2017). Some of the farmers expressed concern that the farmer's voice is not heard—maybe farmers could be involved in policy making to offer a practical point of view.

It was interesting to notice, that organic farming was not just an emotional or ideological decision for the farmers, but according to them it was the rational choice all things considered. As conventional farmers get more education on the benefits of organic farming, more and more might start to consider converting to organic farming. Organic farming has become a sensible alternative for any farmer. Farming is not an easy way to earn a living, but organic farming can make it more economically sustainable for many farmers while contributing to sustainable development as a whole. This research started off with the goal to find out what the reasons for choosing organic farming are, and if sustainability has anything to do with the decision and organic farming in general. Even more than expected, this research showed that in the minds of organic farmers, sustainability and organic farming are very closely connected and relate to each other in practice. Also the development of the perception of sustainability was an interesting discovery; how sustainability is not one of the major reasons for choosing organic production in the first place, but how its importance grows and how the perception of sustainability widens with organic farming.

When we look at the results of this research from a sustainability point of view, we see that economic sustainability is the single largest factor affecting the farmers’ decision to
choose organic farming. Other reasons were sustainability as a broader concept which can be connected to ideological reasons as some mentioned that organic production and a sustainable way of life was the lifestyle that they felt was right for them, and environmental sustainability. In the end, we can conclude that sustainability does affect the farmers’ decision to choose organic farming, and that sustainability and sustainable development increases in importance with the adoption of organic farming, as almost all of the farmers said that after starting organic farming, they take sustainability more in consideration both in their work and personal life and look at sustainability from a more comprehensive perspective. Organic farming and sustainability are inherently connected and the farmers have a lot of respect for nature; in organic farming, you cannot succeed by force. As is characteristic for research with an inductive approach, also this study produced new theory in the form of a new conceptual framework on sustainability in organic farming, that combines five dimensions of sustainability that were identified in the literature review and in the narratives of the farmers: economic, environmental, social and cultural sustainability that are encompassed by the dimension of time.

7.1 Implications for further research

This was a qualitative, exploratory research with an inductive approach; the goal was to find patterns and themes and develop a deeper understanding of organic farmers’ reasons for choosing organic production and their perceptions and attitudes towards sustainability and sustainable development. The results of this research were quite well in line with the results of previous research, when it comes to the reasons for choosing organic farming or converting to organic farming. This research could be supplemented with quantitative research on the reasons for choosing organic production, that could offer more generalizable results. Qualitative and quantitative research could validate each other. A quantitative research would also allow for a larger sample size and more diverse sample selection.

It would also be interesting to study the farmers’ perception of sustainability and how it is epitomized in organic farming more closely. This would require more qualitative research and a narrower perspective on sustainability. It would be interesting to evaluate the sustainability of organic farming by using objective metrics and then incorporate this with the subjective point of view of the farmers. What similarities and differences could be found and why? Does the subjective importance of sustainability
affect the actual sustainability of the farm? Are some organic farms more sustainable than others and why? These are some questions that have not been researched enough previously.

One newer aspect of sustainability that was mentioned in the literature review but not precisely studied in this research is productivity. Productivity is also something that causes quite a lot of debate when evaluating the sustainability of organic farming, as often the productivity of organic production is considered lower than that of conventional production, which in turn can affect the sustainability of organic farming through the use of resources. The productivity of organic farming could be studied through quantitative research – the data should be quite easily accessible.
REFERENCES


**APPENDIX 1  INTERVIEW GUIDE**

Teema 1. Taustatiedot

-Tilan koko
-Milloin tila on perustettu
-Missä tila sijaitsee (maakunta)
-Mitä tuotteita tilalla tuotetaan (ja miksi)
-Mikä yritys takana (oy, toiminimi tms)
-Talous: mistä eniten tuloja ja mistä eniten tuottoja, miten liikevaihto rakentuu

Teema 2. Luomo

-Miten kauan on oltu luomussa
-Mitkä asiat tukivat luomun valitsemista
-Mitkä asiat estivät luomun valitsemista
-Miksi valittiin luomu
-Luomun parhaat puolet
-Luomun tuet
-Ovatko hallituksen luomujuotannon kehitystavoitteet tuttuja (2020 tavoite)
-Miksi luomu on tärkeää

Teema 3. Kestävä kehitys

-Onko kestävä kehitys terminä tuttu
-Onko kestävä kehitys periaatteenä tuttu
-Ovatko kestävän kehityksen ulottuvuudet tuttuja (ympäristö, taloudellinen, sosiaalinen, kulttuuri, aika)
-Onko kestävä kehitys ideologiana tärkeä
-Onko kestävä kehitys ollut tärkeää jo ennen luomun siirtymistä vai onko se tullut luomun mukana
-Miten kestävä kehitys otetaan huomioon toiminnassa (muuten kuin luomun kautta)
-Toimiiko maatila/yritys muuten kestävän kehityksen periaatteiden mukaisesti (ts. onko kestävä kehitys elämäntapa ja näkyvö päivittäisessä elämässä)
Teema 4. Tulevaisuus

-Mitä toiveita tai odotuksia on jatkolle oman tilan kehityksen suhteen
-Mitä toiveita on poliittiselle päätöksenteolle
-Miten hallitus voisi tukea luomutuotantoa
-Miten näet luomun tulevaisuuden
-Tärkeimpitä kehityskohteita luomutuotannossa
## APPENDIX 2  COMMON PATTERNS AND THEMES IN NARRATIVES

### Choosing organic farming

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<tbody>
<tr>
<td>Chose to convert to organic farming.</td>
<td>Converted to organic farming in 2010. The previous farmer (the father) slowly accepted organic farming.</td>
<td>Converted to organic farming in 2015. Was not a big change because the farming techniques were familiar and used in the family.</td>
<td>Converted to organic farming in 1998 in the economic instability of the 1990’s.</td>
<td>Converted to organic farming in 1996. Was not a big change because the farm has not used pesticides for 41 years.</td>
<td>Converted to organic farming in 2009, because the prices of fertilizer increase suddenly.</td>
<td>Converted to organic farming in 2002 (fields) and 2005 (animals). Decision was made together with parents, who were then still a big part of the farm’s everyday work.</td>
<td>Converted to organic farming in 2015 after talking about it with a friend.</td>
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<td>Did not have to make the decision to convert to organic farming.</td>
<td>Father converted to organic farming in 1995; was easy to continue from there.</td>
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<td>It was clear from the start that they wanted to produce organically.</td>
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<td>Economic reasons for conversion.</td>
<td>Better profitability: no chance to continue in conventional farming</td>
<td>Not just an ideological decision: did profitability calculation. Organic farming is more profitable.</td>
<td>Started from financial insecurity: wanted to secure the farm’s viability. Strategic choice; have to find own place on the market.</td>
<td>The viability and profitability of the farm in conventional farming was poor. Prices of fertilizers increased rapidly, it was more affordable to convert to organic farming.</td>
<td>The better profitability of organic farming was one of the reasons for choosing organic farming. Strategic business choice: specific target group on the market.</td>
<td>Among other things, the better profitabiltiy of organic farming was an important reason to convert.</td>
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<td>Chose organic farming because wanted to avoid chemicals.</td>
<td>Absolutely did not want to use chemicals. Father died of cancer; suspects connection to chemicals. Hated the smell of chemicals and</td>
<td>Did not want to use chemical sprays. Has worked in the food industry and seen all the chemicals and additives that are used; does not</td>
<td>Did not like the pesticide spraying in conventional farming. It was often done in the night.</td>
<td>Did not have to use glyphosate. Does not want to poison the fields and work with chemicals.</td>
<td>Saw in the 1980’s how a poisoned field affected the birds feeding on it. Does not want to produce poisoned food.</td>
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got headaches; decided was never going to use them.

want that. Clean, safe food is important.

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<td><strong>Sustainability/sustainable development</strong></td>
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<td>was a reason to choose organic farming.</td>
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<td><strong>Wanted to ensure the sustainability of the farm.</strong></td>
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<td><strong>Sustainability was the starting point to conversion.</strong></td>
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<td><strong>Sustainability and sustainable development was important even before converting to organic farming.</strong></td>
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<td><strong>Sustainability is a way of life.</strong></td>
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<td><strong>Wants to make the entire business sustainable, not just one product.</strong></td>
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<td><strong>Chose organic farming because of meaningfulness or ideological reasons.</strong></td>
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<td><strong>Was interested in the farming techniques used in organic farming and the ideology of living in harmony with nature.</strong></td>
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<td><strong>Organic farming fits the farmer’s ideology and way of thinking.</strong></td>
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<td><strong>Organic farming is more meaningful because you can’t use chemicals to correct your mistakes, but you have to learn from</strong></td>
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<td><strong>Noticed on an organic farming course that the attitude towards farming was more meaningful and because of it decided to convert to organic farming.</strong></td>
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Independence from big agricultural corporations was a reason to convert to organic farming.

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<td>Does not want to support the big fertilizer factory Jara (&quot;It's a big villain&quot;). Does not want to waste all the subsidies on Jara or Hankkij a or other big agricultural stores. &quot;The standard farmer is the slave of the agricultural stores&quot; and &quot;When you are an organic farmer you are your own master&quot;.</td>
<td>In conventional farming, all the profits go to large corporations, in organic farming the farmer can be inventive and take the initiative to improve profitability.</td>
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<td>Organic farming was a strategic choice.</td>
<td>Organic farming is a strategic choice. Competition is tough, you have to find your own place on the market.</td>
<td>Organic farming is a strategic choice; you have a very specific target group.</td>
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<td>Environmental reasons for choosing organic farming.</td>
<td>During studies, the farmer learned more about environmental challenges and started to get interested in environmental issues and as a consequence decided to convert to organic farming.</td>
<td>The easiest way to save the planet is organic food; you do not have to give anything up, but it helps slow down climate change and improves biodiversity. This is a value based</td>
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You have a feeling that you’re taking care of nature.

Perceptions of sustainability and how sustainability shows in their farming

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| Cultural sustainability and values.    | Offers working space for artists. | It is important to preserve the history of the farm, has an emotional attachment to it. | Organizes cultural events at the farm. | Organizes theatre nights, Christmas tree safaris; offers "old-time experiences". The farm's and the village community's history is important; there's for example a book about it. | There is a lack of grazing animals in the Finnish countryside. There are many aesthetic values in agriculture. | Produce agriculture. Protects old buildings, scenery, food recipes. Organizes events in nature, such as sheep yoga. |}

| Social sustainability. | Organic farming support social | There's a network of | Interacts a lot with other organic | Cooperaition with other | Gets a lot of support from | Cooperaition with other | Cooperaition with other | Interacts a lot with other organic |
**Economic sustainability.**

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<td>It's easy to market organic products, price difference between feed and foodstuffs is not big. Econom</td>
<td>The profitability is organic farming is better. Finnish organic products are popular abroad. There is high</td>
<td>Organic farming has enabled a balance between ecologic and economic sustainability.</td>
<td>Organic farming made it possible to continue farming at all, it's more economically sustainable.</td>
<td>Organic farming makes the farm more environmentally, socially and economically sustainable.</td>
<td>Sharing of knowledge and peer support. Employs local workforce.</td>
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Environmental sustainability was the main reason to choose organic farming. Demand for organic products.

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<td></td>
<td>Thinks a lot about sustainability and uses circular economy.</td>
<td>Comprehensive ecological sustainability. Crop rotation and other organic farming techniques support environmental sustainability.</td>
<td>Organic farming enables carbon sequestration in soil.</td>
<td>Organic farming takes the environment in consideration in a much larger scale: not just what you do on one field, but how it affects the environment around you. The farm aims to preserve traditional biotopes and biodiversity.</td>
<td>Circular economy in organic farming benefits environmental sustainability.</td>
<td>Most of organic farmers are very knowledgeable when it comes to environmental issues. Biodiversity is important and is interested in environmental issues.</td>
<td>The farm’s pasture are valuable biotopes and support biodiversity.</td>
<td>Organic farming makes the farm more environmentally, socially and economically sustainable. Does not want to waste nutrients.</td>
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<td>Sustainability from the perspective of time.</td>
<td>Organic farming requires long-term planning, for example in crop rotation and the improvement of soil health. Wants to leave something for future generations as well.</td>
<td>Does not want to use up all the nutrients and the land, but wants to leave something for future generations.</td>
<td>In organic farming, you do not see results right away but it requires patience and looking at a longer time perspective. Land should be farmed in a profitable, productive way in a long-term perspective.</td>
<td>Organic farming requires long-term planning. Profitability has to be divided among several years. Thinks about the future in the perspective of hundreds of years, not tens of years. The farm needs to be environmentally, socially and economically sustainable. Farming is put in context and in the perspective of time, not just thinking about the optimization of current farming.</td>
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Politics: organic farming subsidies and goals for increasing the area of organically farmed land

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<tr>
<td>Organic farming benefits form at least 1/3 of the farm’s turnover or are in some other way a significant source of income.</td>
<td>Benefit s are the single largest source of income.</td>
<td>The largest share of income is from benefits</td>
<td>Organic farming benefits are around 1/3 or a little less than half of the turnover.</td>
<td>Organic farming benefits form a significant part of the income. In this market model, Finnish farms are dependent on benefits.</td>
<td>Benefits are almost as much of the turnover as the actual products.</td>
<td>Organic farming benefits form around 50% of the income.</td>
<td>A large part of the turnover is from benefits.</td>
<td>Income is quite oriented to organic farming benefits. When the crop yields are good, around 60-70% of income is from crops and the rest is from benefits.</td>
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<td>The government’s goal to increase the organically farmed area to 20% is a step in the right direction.</td>
<td>Great goal, but can we afford it? There is a demand for organic products, and Finnish organic products are popular</td>
<td>Good goal, we are behind, should get professional kitchens involved.</td>
<td>This is a reasonable and good goal.</td>
<td>This is a good goal. The Finnish environment is such that it supports the success of organic farming. Hopes that the goal is</td>
<td>There is still room to produce more organic food. Finnish market is small – could export more.</td>
<td>It’s good to have goals but we should also start acting to reach them. Large corporations (a few grocery store chains) have a</td>
<td>Why not 80% or 100%? We could ensure a sufficient amount of organic feed for animals in organic production. Also if all bread grain could be produced in Finland, we would be on more</td>
<td>Could ensure a sufficient amount of organic feed for animals in organic production. Also if all bread grain could be produced in Finland, we would be on more</td>
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<tr>
<td>Is not sure if the government’s goal to increase the organically farmed area to 20% is a step in the right direction.</td>
<td>What would happen to the value of organic products if there is a lot of production? What about profitability? 30% would be the maximum.</td>
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