The impact of short food supply chains on the embedding of farms, farmers and farming practices

A QUALITATIVE STUDY

WAGENINGEN UNIVERSITY AND RESEARCH
CHAIR GROUP: RURAL SOCIOLOGY
AUTHOR: JULIËT VELS
STUDENT NUMBER: 1037992
COURSE CODE: RSO80436
EXAMINER: J. KLOK
SUPERVISOR: DR.IR. D. ROEP
2ND SUPERVISOR: DR. IR. J. HASSINK

Abstract

In the current Dutch agriculture system, farmers are confronted with high production costs, low incomes and accumulating regulations. It is therefore not surprising that farmers nowadays tend to choose for a different direction of their enterprise. An option which becomes more popular amongst farmers is initiating or participating in a short food value chain (SFSC). It is important to note that there are various forms of SFSCs. This study focuses on independent SFSCs, a SFSC in the form of a network and a SFSC in the form of a cooperative. The aim of this study is to focus on how farmers, their farming practices and farms are impacted by the initiation or participation in a SFSC. In this study, nine farmers who initiate or participate in a SFSC, were interviewed. Three farmers who maintain their SFSC independently, three farmers who decided to participate within a network and three farmers who decided to participate within a cooperative. During the interviews, timelines and schematic relation overviews were drawn, to visualize the evolvements and relations of the farms over time. This all was done with the use of the three-fold embedding theory from Methorst et al. (2017). The chosen theory enabled consideration of the socio-material context and the embeddedness of farms, farmers and farming practices. The results demonstrate that the initiation or participation in a SFSC does play an important role in the evolvement and embeddedness of farms, farmers and farming practices. However, it is acknowledged that the degree of impact differs per farm and per type of SFSC. The findings have the potential to serve as a source of inspiration for other farmers, researchers and governmental bodies engaged in the development of sustainable agricultural food systems.

Keywords: Short food supply chain, SFSC, impact, farms, embeddedness

Acknowledgements

In this paragraph, I would like to express my sincere gratitude to all those who have contributed to my thesis, either directly or indirectly. First of all, I would like to thank my supervisors Dirk Roep and Jan Hassink for their support, constructive feedback, guidance, but above all for their patience and empathy. It really meant a lot to me, and I will never forget it. Secondly, I would like to thank all the nine farmers who were willing to put their time and energy into the interviews. Your unique stories are not only inspiring to me, but I do hope that they are also inspiring to other people. Thirdly, I would like to thank my boyfriend, family and friends for their support, feedback, patience and loving gestures. On top of that, special thanks to Jolien Klok, who was willing to become examiner of this thesis. The past years have not been easy for me, due to my concussion complaints, I was not always able to work and focus on the thesis. Luckily, I was able to enter a rehabilitation trajectory, were I got the medical care and support I needed. Therefore, I would like to thank all the medical professionals, who have helped me during my rehabilitation trajectory. Because of your help, I was able to take on more workload and make longer workdays. Thank you all very much!

Table of contents

1. Introduction

Literature shows that interest in short-food supply chains (SFSCs) in the Netherlands has grown over the last years (Wubben et al., 2013). The European Union defines SFSCs as: '*a supply chain involving a limited number of economic operators committed to cooperation, local economic development, and close geographical and social relations between producers, processors and consumers*' (European Union, 2013). Farmers tend to choose for a different direction of their enterprise, by for instance participating in a SFSC. This is mainly due to the high production costs, the low incomes, and the accumulating regulations farmers have to deal with (Wubben et al., 2013). Besides the growing interest in SFSCs, the Ministry of Agriculture, Nature, and Food Safety is trying to implement SFSCs into policy goals of provinces of the Netherlands (Tacken et al., 2021).

According to several researchers there are various forms of SFSCs in the Netherlands (J. Hassink, personal communication, 26 October 2022). The subdivisions according to Hassink and colleagues are 1) socially driven initiatives, 2) community-supported agriculture (CSAs) and 3) economically driven initiatives. It is important to note that these subdivisions serve as an introduction around SFSCs in this thesis and should not be considered as the only truth. Socially driven initiatives are initiated by social entrepreneurs, citizens and civil society organizations. The drivers behind socially driven initiatives are often focused on social values. Their drivers are often in line with their achievements. A driver could be for instance wanting more social contact and a corresponding achievement could be increased involvement in the community. An example would be an urban farming initiative (Abma et al., 2013). CSA according to Adam (2006) is defined as follows: 'In basic terms, CSA consists of a community of individuals who pledge support to a farm operation so that the farmland becomes, either legally or spiritually, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production.'. The drivers behind CSAs are often reconnection with the land and foster a sense of community and cooperation (Adam, 2006). The achievements of CSAs are often building social capital, reciprocity and trust within the CSA (J. Hassink, personal communication, 26 October 2022). Economically driven initiatives are initiatives of farmers or entrepreneurs who started to cooperate more in regional chains. The motivations of those farmers or entrepreneurs are logically initially economically driven. An achievement might be for example creating additional value of products (Wubben et al., 2013). As can be read, drivers and achievements may vary per initiative, but they also might intermingle or evolve over time, which makes it even more complex to study those initiatives in reality.

As stated earlier, interest in participating or initiating in a SFSC is increasing amongst farmers in the Netherlands. According to Venema et al. (2021), 20% of Dutch farmers is already participating in SFSCs. Assuming that the number of SFSCs likely increases in the Netherlands over the next couple of years, their impact will likely grow as well. Therefore, it is imperative to conduct research on SFSCs. There are various ways for a farmer to join or initiate a SFSC. Firstly, by starting a farm shop at the farmer's courtyard, which is also run by the farmers themselves and their families. For instance, beef farm 'de Blaak' has its own farm shop, which is completely managed by the farmer's family (Boerderij de Blaak, n.d.). Secondly, farmers may join a farmer's cooperative. In this form, farmers are working together in a cooperative, by selling their products in an outsourced collective shop. An example of this type is cooperative Landwinkel (Ons unieke concept | Landwinkel, n.d.). Thirdly, farmers may join a regional or local network. In this form, farmers deliver their products to a wholesale company. The wholesale company carries out the distribution of the products to local shops, supermarkets, or directly to the customer. An example of such a wholesale company is Oregional (Oregional, n.d.). As can be read, these forms of SFSCs are all organized differently.

When a farmer starts to participate or initiate a SFSC, a whole new situation will be created intentionally or unintentionally. In other terms, a whole new embedding on the farm, and the farming practices will arise. New relations and opportunities will occur. As can be read, there are

various ways to initiate or participate in a SFSC. Therefore, the impact these three ways of initiating or participating in a SFSC have on farms, farmers and farming practices, might vary. The scope of this research would be to explore these three ways of initiating or participating in a SFSC.

Several studies have been conducted on SFSCs. For example, in the study by Roep and Wiskerke (2010) a conceptual framework was developed, which shows that the process of increasing the sustainability of a SFSC is entrenched in strategic choices in relation to governance, embedding and marketing. Another example is Venema et al. (2021), this study shows a monitoring of SFSCs in the Netherlands. Topics like, numbers of SFSCs, features of SFSCs and geographical distribution of SFSCs are covered in this study. In another study from Chiaverina et al. (2023a), the economic performance of farms engaged in SFSC is examined. As can be read, there is already a fear deal of research regarding SFSCs, where most of the time the whole SFSC is the central point of view.

In comparison to previous studies on SFSCs, this thesis adopts a more 'farmer-central-approach'. Therefore, this study takes place at farm-level, whereby the social material context is taking into account. This 'farmer-central-approach' combined with the focus on different ways of initiating or participating in a SFSC, makes this thesis contextually different from most existing literature. Consequently, this thesis is a valuable addition to further the understanding of this topic.

2. Research question(s) and objectives

The main research goal of this study is to focus on how farmers, their farming practices and farms are impacted by the initiation or participation in a SFSC. Thus, the central research question is: *How has the initiation or participation in a SFSC impacted farmers, their farming practices, and farms over time?* This will be investigated further by gathering data through a qualitative perspective:

- *What are the main drivers and goals of farmers for initiating or participating in a SFSC?*
- *How did farmers, their farming practices and farms, who initiate or participate in a SFSC, evolve over time?*
- *How did the change of initiating or participating in a SFSC affect the embeddedness of farmers, their farming practices and farms?*
- *What are the similarities and differences in the embeddedness of farmers, their farming practices, and farms when initiating or joining different types of SFSCs?*

The appurtenant objectives of the sub-questions are stated as follows:

- *Understand the main drivers and goals of farmers for initiating or participating in a SFSC.*
- *Observe and understand the evolvement of farmers, their farming practices and farms, from the moment they initiated or participated in a SFSC until now.*
- *Observe and analyse how the change of initiating or participating in a SFSC affect the embeddedness of farmers, their farming practices and farms.*
- *Understand and analyse the differences and similarities in the embeddedness of farmers, their farming practices, and farms when initiating or joining different types of SFSCs.*

3. Literature review

The focus of this thesis is on how farmers, their farming practices, and farms are impacted by initiation or participation in a SFSC. In previous studies about SFSCs, several theories were used.

For example, in the paper of Renting et al. (2003) the development and incidence of alternative food networks within a European-wide context is further explored. In this case, an alternative food network can be seen as a synonym for a SFSC. Renting et al. (2003) start by describing the problems and difficulties the conventional food sector faces nowadays and how it affects not only the producers, but also the consumers. Renting et al. (2003) states that new rural developments (e.g. SFSCs) are an active response of farmers to the changing political and economic situation of their enterprise. In the following paragraph Renting et al. (2003) tried to delve into the various mechanisms for extending SFSCs in space and time. Thereby, Renting et al. (2003) also explored the variety of quality definitions and conventions that are used within SFSCs. This led to conceptualisations, which are based upon an intensive case-study analysis (Renting et al., 2003). The categorisation for the first dimension is; Face-to-face SFSCs, Proximate SFSCs and Extended SFSCs. Within this category, there are also subcategories. The categorisation for the second dimension is split up into regional or artisanal characteristics paramount and ecological or natural characteristics paramount. This typology enabled Renting et al. (2003) to get a better understanding of the mechanisms and dynamics of SFSCs within a European-wide context. Even though, the theory from Renting et al. (2003) is extensive and maybe some components of the theory of this research might have overlap with the focus of this thesis, the scope of Renting et al. (2003) is too broad. Considering the focus of this thesis only pertains to farm-level.

In another paper by Wubben et al. (2013), SFSCs are further explored by studying the variations in business models (BMs) of SFSCs in the Netherlands. Those business models may be attributed to the initiator-stakeholder, who can be for instance suppliers, distributors, or buyers. According to Wubben et al. (2013), a BM consists of the value proposition, the value creation, and the value capture, which make up the conceptualisation of a BM in relation to initiator-stakeholders. Using this, the relationship and the composition of various BM-constructs have been studied. The theory and concepts from Wubben et al. (2013) are not the best fit for the theoretical approach this thesis tries to encapsulate. Because this thesis tries to investigate how farmers, their farming practices, and farms are impacted by the participation in a SFSC, not the differences in the business models of SFSCs.

In an earlier mentioned paper from Roep and Wiskerke (2010) reflections have been written about the construction of alternative sustainable food networks with the use of the GEM-framework. GEM stands for governance, embeddedness, and marketing. The paper is based upon the results of an EU-funded research project called SUS-CHAIN. The SUS-CHAIN project has investigated the potential role of SFSCs in sustainable rural development. According to Roep and Wiskerke (2010) the sustainability of an SFSC is rooted in strategic choices in relation to governance, embeddedness and marketing, and the coordination of those three dimensions. According to Roep and Wiskerke (2010), governance entails structural and process-related aspects of creating, maintaining, and transforming a food network. Roep and Wiskerke (2010) view embeddedness through multiple dimensions, which entails the following: Firstly, the extent to which food supply chains utilize local resources. Secondly, the extent to which stakeholder organizations and local actors are involved. Thirdly, the extent to which the rules, values, and codes that represent the food product and the chain through which it is produced are shared by the wider network of consumers, stakeholders, and society. Apart from that, Roep and Wiskerke (2010) also point out that food production and agriculture are embedded in socio-material resources, that vary from place to place, as a result of the different articulation or co-production of natural and social ordering processes. Taking into account the socio-material resources is particularly interesting to investigate the embeddedness of farmers, their farming practices and

farms with. Because, farmers, their farming practices and farms are as well social as they are material. According to Roep and Wiskerke (2010) marketing entails the market-oriented business management of an alliance or enterprise. Additionally, Roep and Wiskerke (2010) make a distinction between strategic and operational marketing. The GEM-framework seems to have some overlap with the focus of this thesis, especially concerning the concept embeddedness.

Apart from research articles, there are also monitoring reports about SFSCs in the Netherlands. Those reports are often written by employees from the Wageningen University or other universities and are subsidised by the Dutch Ministry of Agriculture, Nature and Food Quality or by the Dutch provinces. Examples are Venema et al. (2021) and Van der Schans & van Wonderen (2019). These reports describe that, there are lots of quantitative data available about SFSCs in the Netherlands. Subjects which are covered in those reports are, for example, geographical distribution of SFSCs, features of SFSCs, turnovers of SFSCs, bottlenecks and recommendations for SFSCs. However, theories or theoretical approaches are not described in those reports. Therefore, the reports will not be used for forming an analytical framework for this thesis.

Nonetheless, it can be concluded that plentiful research has been done about SFSCs. Topics that came up were amongst others different types of SFSCs, how to maintain an SFSC in a sustainable manner and what the advantages and disadvantages are of SFSCs. Furthermore, it can be concluded from previous research, that it is often more focussed on the whole supply chain instead of only at farm-level. Thereby, in many previous studies about SFSCs, farmers and their farms are part of the research, but are rarely the central point of view. Therefore, theories that have a more 'farmer-central-approach' are considered to be more suitable for this thesis.

4. Theoretical framework

In order to conduct this empirical research with the best fitted analytical framework, a proper theoretical approach needs to be found. As stated before, this thesis aims to investigate how farmers, their farming practices, and farms are impacted by the initiation or participation in a SFSC, with a farmer-central-approach'. Nevertheless, a 'farmer-central-approach' is still quite comprehensive. Because plentiful factors have to be taken into account within this scope. For instance, the environment of the farm, the relations the farmers have with other actors, the norms and beliefs a farmer might have and so on. This 'farmer-central-approach' also includes the farming practices. Examples of farming practices are milking cows in the milking parlour, ploughing the land or feeding cattle etc.

The farmer is in charge of the decisions about those farming practices. According to Roep (2000), a farmer makes decisions about everyday farm management and strategic decisions around farm development in a dynamic context, and this is shaped by social and material factors. When a farmer makes a decision, this will shape his farming practices, but it will also shape the relations between the farm and his context (van der Velde, 2020; Methorst et al., 2017; Roep, 2000). Id est, farming practices are embedded in a socio-material context (Methorst et al., 2017). This is also in line with the earlier mentioned paper from Roep and Wiskerke (2010), about the idea that agriculture and food production are embedded in socio-material resources. Methorst et al. (2017) stated the following about embeddedness of a farm: *'The embedding of the farm (including the farmer as a person) at a given moment in time is the result of decisions and developments in the past. This specific embedding affects the networks of and influences on the farmer, thus affecting farmers' perception of the opportunities for farm development. This perception of the opportunities, in turn, affects the strategic decision-making process. Hence, embedding is an iterative process.'* (p. 15). This is applicable to the research's topic of this thesis. As a farmer initiates or participates in a SFSC, re-embedding takes place, which involves a reconfiguration of relations, practices are embedded in, which is a dynamic and iterative process (Roep and Wiskerke, 2010; Methorst et al. 2017). In this

thesis it is assumed that these re-embedding processes on a farm has an impact on farmers, their farms and their farming practices.

Furthermore, a theoretical framework that takes into account the socio-material context and the embeddedness of a farm and its farming practices, would be considered suitable for this thesis. According to Methorst and colleagues the embeddedness of a farm can be divided into three interacting relations (see figure 1). Those relations are socio-cultural relations, value chain relations and resource relations. The socio-cultural relations include the values, norms, and culture of farming a farmer identifies himself or herself with (Methorst et al., 2017). The value chain relations focus on which value chain a farm is linked to or a part of, and which networks or spheres of influence affect a farm its development (Methorst et al., 2017). In the context of this research, the meaning of resource relations is the origin of resources for farm production (Methorst et al., 2017). The three relations combined create a three-dimensional embeddedness perspective and offer an approach to investigate the differences in embedding of farms (Methorst et al., 2017). This theoretical framework can be useful in analysing and explaining re-embedding processes, that takes place on farms which either initiate or participate in a SFSC. And eventually, how this strategic decision and evolvements have an impact on the farmer, the farm, and the farming practices. Therefore, the framework of the three-fold embedding theory is used to make up the analytical framework for this thesis. This naturally, raises questions on how to measure the re-embedding of farms and the appurtenant sub-questions to eventually answer the main research question. Therefore, in the next paragraph, appropriate qualitative methods are described.

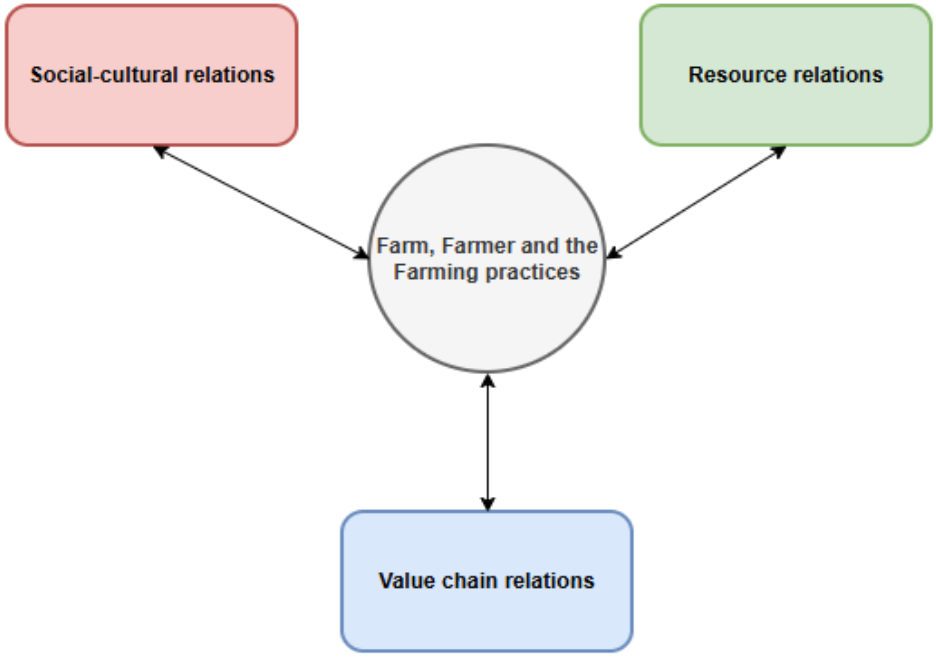

Figure 1:The three-fold embedding theory, based upon Methorst et al., (2017)

5. Methodology

5.1 In-person interviews

In-person interviews were one of the main sources of data for this research. Interviews were conducted with three types of farmers, who own or who join a SFSC in the Netherlands for at least five years. Thus, farmers with a farm shop at their own farm, farmers who join a farmer's cooperative, and farmers who join a regional/local network. All the four sub-questions were fully or partly covered by these in-person interviews. Sub-question one was tackled by asking open-ended but yet simple interview questions. The objective of this part was to gain insights into the main drivers and goals of farmers for initiating or participating in a SFSC. Sub-question two was also tackled by asking open-ended but more in-depth interview questions. The objective of this part was to gain insights into the evolvement over time of the farmer, the farming practices, and his/her farm. Sub-question three was tackled by asking open-ended interview questions. These interview questions were specifically based upon the three-fold embedding theory from Methorst et al. (2017). The objective of this part of the interview was to analyse how initiating or participating in a SFSC affect the embeddedness of farmers, their farming practices and farms. The last sub-question was answered by comparing and analysing the answers given from all the interviews, the created corresponding timelines, schematic relation overviews and profiles. The nine interviews were conducted and were divided into three interview strategies of which each had its own type of interviewees. The first three interviews were held with farmers who own a farm shop at their own farm for at least five years in the Netherlands. The selection procedure was established by directly contacting several initiatives, which did meet the research requirements. These interviews were semi-structured interviews with open-ended questions, to assure the comparability of the data (Kumar, 2018). The second three sets of interviews were held with farmers who join a farmer's cooperative for at least five years in the Netherlands. Here also the selection procedure was established by directly contacting several farmers from a selected cooperative. These interviews were also semi-structured with open-ended questions, to assure the comparability of the data. The third three sets of interviews were held with farmers who join a regional/local network for at least five years in the Netherlands. The selection procedure was established by directly contacting several farmers from a network. Here also, the interviews were semi-structured interviews with open-ended questions, to assure the comparability of the data. Table 1 shows a summary of the interviewing strategy for the various interviews. After the interviews, the audio recordings were written out in transcripts in Dutch. In order to enhance the readability of the interviews, the interviews were transcribed in intelligent verbatim. The final interview transcripts can be found in the appendix.

5.2 Timelines

A timeline was constructed during each interview as an interactive conversation piece. The timeline method is according to Zaalmink et al. (2007) a tool to present the influences and meaningful events from in- or outside a network over time. It is suitable for monitoring and evaluation. But in this case, instead of a network, a farmer, his/her farming practices and farm were the central point of the timeline. Id est, with this method answers for the second research question were given, in addition to the regular open-ended interview questions. After each interview, the first draft of the timeline was sent to the farmer in question for an additional check. The final timelines were made visual and can be found in the appendix.

5.3 Schematic relation overviews

In addition to the timelines, three distinct schematic relation overviews were constructed during the interviews and served as interactive conversation pieces as well. The first schematic relation overview represents an analysis of the relations that the farmer had prior to the commencement of the SFSC. The second schematic relation overview represents an analysis of the relations that the farmer has or did have during the SFSC. The third schematic relation overview

represents an analysis of the relations that the farmer has since the participation in a network or a cooperative. This method provided partial answers to the third research question. After each interview, the first drafts of the overviews were sent to the farmer in question as well for their review and feedback. The final schematic relation overviews can be found in the appendix.

5.4 Profiles

In addition to the interview transcripts, timelines and schematic relations overviews, individual profiles of each farm were constructed. This was done to create an easy and quick overview of each farm. Rather than reading the interview transcripts, the reader can, if they wish, read the profile to get an impression of each farm. After each interview, the drafts were sent to the farmers for their review and feedback. The final profiles can be found in the appendix.

5.5 Analysis

The collected data was analysed in QDA software Atlas.ti. By the use of this software system, all the data from the nine interviews was put together on the same online platform. Through coding, key terms were established to organize and filter the relevant data, that has been used to answer the research questions. Deductive and inductive coding was used interchangeably during the coding of the interviews.

5.6 Consent, data management and positionality

Prior to every interview, a consent form was shown to the interviewees. This consent form provided information about the relevance and usefulness of the research, and it asked the interviewees whether they would give consent to the following questions:

1) Whether it was allowed to make an audio of the interview.
2) Whether it was allowed to process the answers in a transcript.
3) Whether it was allowed to state their name in the research report.

The consent form was based upon the *'Netherlands Code of Conduct for Research Integrity'* (Netherlands Code of Conduct for Research Integrity, 2018). The signed consent forms can be found in the appendix.

The collected data was stored on a laptop with a password, concerning the protection of the data. Besides that, the data was stored and backed up, on the cloud of the WUR servers, in the case that the laptop might have crashed.

As a researcher I needed to make sure that I took a neutral position when conducting the interviews. Not only neutral, but also as equal to the interviewees. The interviews were taken on the farms of the interviewees, by doing so an informal ambiance was easier to accomplish, where the interviewees felt free to speak their true thoughts. After each interview, a small present was given to each interviewee, as a token of appreciation.

Table 1. Matrix of interview type and topics that is covered in each interview.

Type of Interview	**Type of Interview Questions**	**Number of participants**	**Topics covered**
Farmer with a farm shop at their own farm	Open	3	- The main drivers and goals of farmers for initiating or participating in a SFSC - The evolvement of farmers, their farming practices and farms, from the moment they initiated or participated in a SFSC until now. - Observing and understanding how initiating or participating in a SFSC let to re-embedding for farmers, their farming practices and farms
Farmer in a farmer's cooperative	Open	3	- The main drivers and goals of farmers for initiating or participating in a SFSC - The evolvement of farmers, their farming practices and farms, from the moment they initiated or participated in a SFSC until now. - Observing and understanding how initiating or participating in a SFSC let to re-embedding for farmers, their farming practices and farms
Farmer in a regional/local network	Open	3	- The main drivers and goals of farmers for initiating or participating in a SFSC - The evolvement of farmers, their farming practices and farms, from the moment they initiated or participated in a SFSC until now. - Observing and understanding how initiating or participating in a SFSC let to re-embedding for farmers, their farming practices and farms

6. How getting involved in a SFSC can change farm relations

The results of the data from this thesis are displayed in several ways. First, an introduction of the interviewed farmers will be given in this paragraph. Here, every farm is introduced with the most important features and storylines. These features and storylines are based upon the profiles, which can be found in the appendix. The features and storylines are enriched with the corresponding timelines and schematic relation overviews. All the selected farmers participate within a SFSC or have a SFSC by themselves independently. For a quick overview see table 2. In order to provide a comprehensive understanding of the data, each farm is addressed separately. Apart from that, in the schematic relation overview colours are used to address relational changes. Red stands for the relations a farm has, before the initiation or participation in a SFSC. Green stands for the relations a farm has, since the initiation of a SFSC. Yellow stands for the relations a farm has, since the participation in a SFSC. The only exception to this is farmer 4. As he decided to go from an intensive beef farm without a SFSC, to an extensive beef farm with a SFSC, to an extensive beef farm with a combination between a longer value chain and a SFSC.

Table 2: Interviewed farm(ers) and their features

FARM(ER)	***TYPE OF FARM***	***TYPE OF SFSC***	***HA***	***CATTLE***	***STAFF***
FARM(ER) 1	Multifunctional organic beef farm	Independent	50	15 cows	No hired staff
FARM(ER) 2	conventional circular 'cheese and dairy making' farm	Independent	16 Ha arable land + additional pastureland	45 cows	Hired staff
FARM(ER) 3	conventional nature inclusive and 'dairy making' farm	Independent	67 Ha + 12 Ha leasehold land	130 cows	Hired staff
FARM(ER) 4	extensive beef farm	Network	350 Ha	400 cows	No hired staff
FARM(ER) 5	conventional dairy making farm	Network	55 Ha	240 cows + 1100 pigs	Hired staff
FARM(ER) 6	conventional buffalo dairy farm	Network	40 Ha	3000 Buffalo's	No hired staff
FARM(ER) 7	multifunctional modern 'diary and cheese making' farm	Cooperative	?	110 cows	Hired staff
FARM(ER) 8	conventional multifunctional 'dairy and cheese making' farm	Cooperative	55 Ha	100 cows	Hired staff
FARM(ER) 9	multifunctional conventional 'dairy and cheese making' farm	Cooperative	50 Ha	45 cows	Hired staff

Farm(er) 1:

Farm 1 is a multifunctional organic farm that includes a small beef cattle branch, an arable farming branch and a hay-drying branch. The meat produced by the beef cattle is directly sold in their farm shop, which is located on the barn floor. They also sell cheese, chicken, pork, eggs, dairy products, bread and dry goods from regional and organic producers in their farm shop. The farm is managed by the farmer, the farmer's wife and their youngest son. Figure 2 below shows how their farm has evolved over the years.

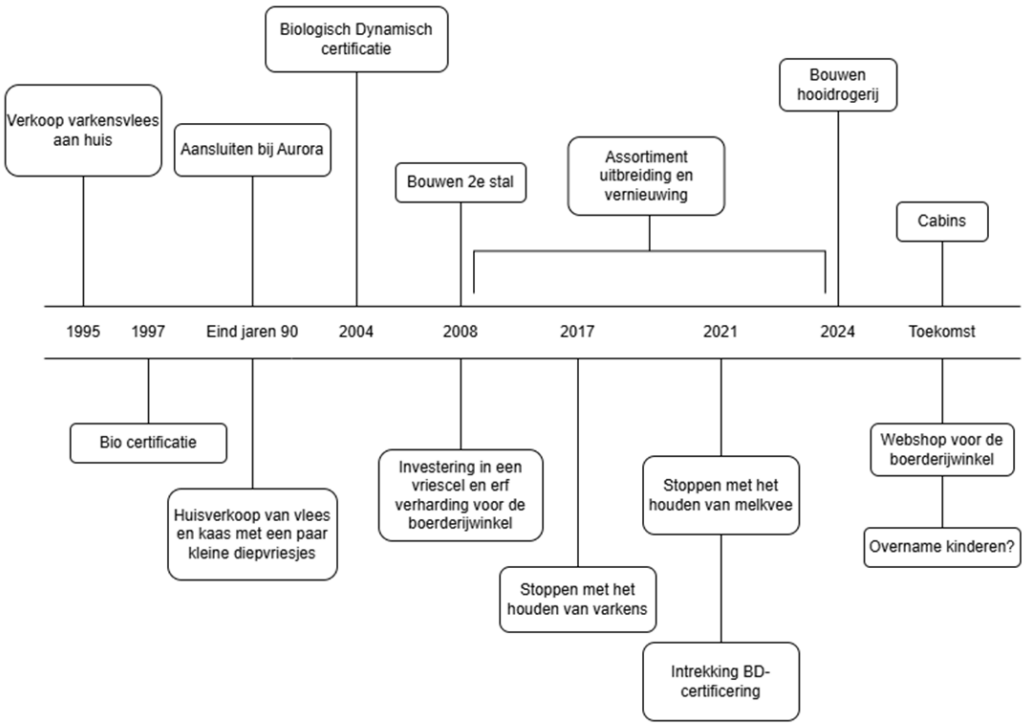

Figure 2: Timeline farm 1

Before farm 1 started with the SFSC, the farm was a regular mixed farm with cows and pigs. But in 1997 the farmer decided to transform his farm into an organic farm. Because of this, the farm also switched to another diary cooperative. But apart from the organic certification and the other dairy cooperative, the relations from farm 1 were quite comparable to those of a conventional farm. This is illustrated in figure 3.

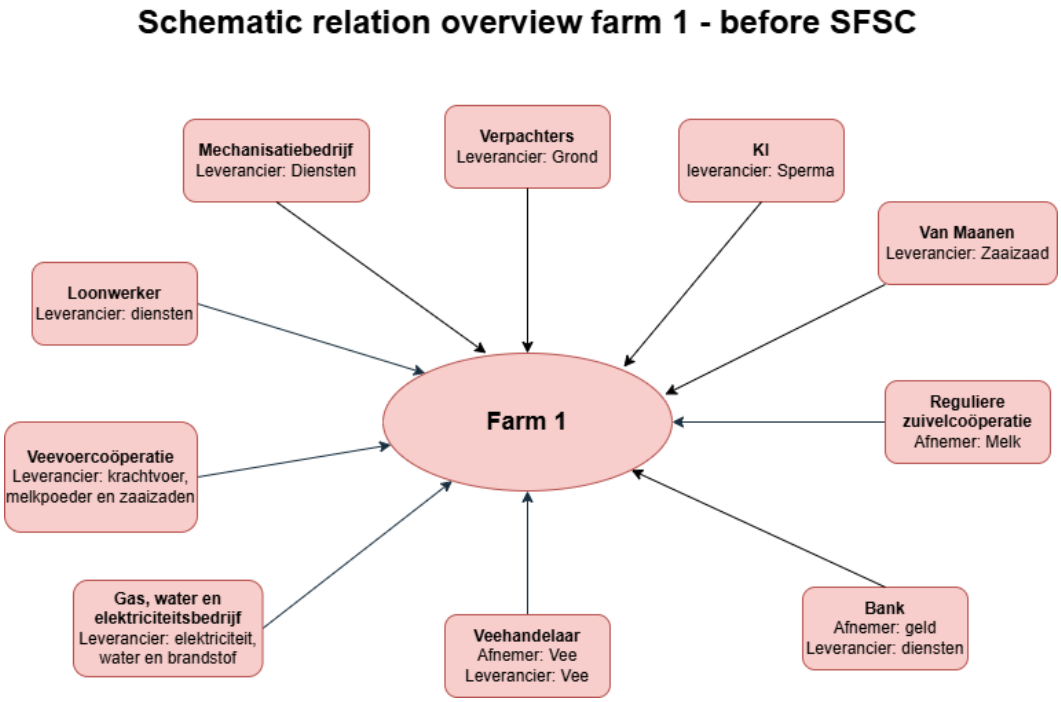

Figure 3: Schematic relation overview farm 1 - before SFSC

Farm 1 started their SFSC really small, just with a few freezers in the barn floor and a calculator. In 2008, the farm shop was renovated and rebuilt, and an investment was made in a freezer cell. The product range for the farm shop was expanded with organic and local products. Apart from the growing group of suppliers, the group of buyers, like customers and catering branches, grew as well. Furthermore, the farming practices were adjusted to be able to run the farm shop. Such as planning milking of the cows, outside the opening hours of the farm shop. The added and changed relations, since the initiation of the SFSC on farm 1 is illustrated in figure 4.

Schematic relation overview farm 1 - since initiation SFSC

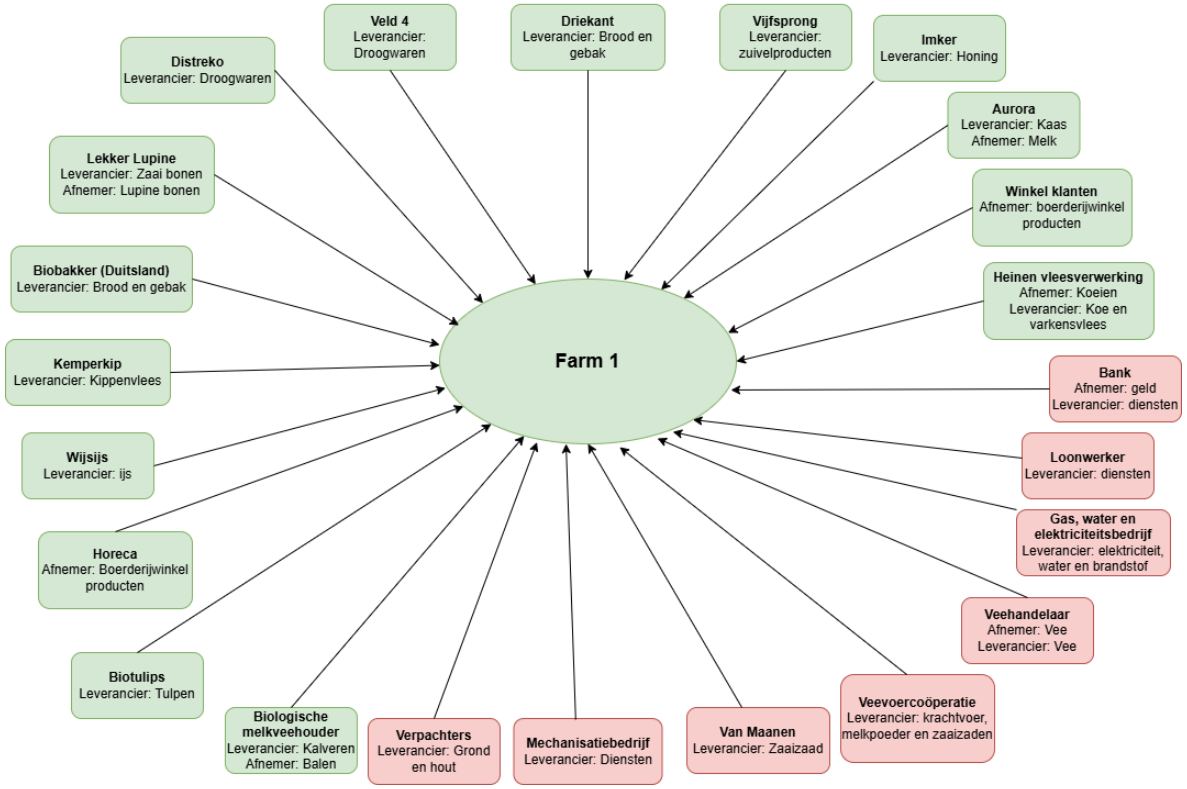

Figure 4: Schematic relation overview farm 1 - since initiation SFSC

Apart from the initiation of the SFSC, there were other evolvements which did happen on farm 1. For example, from the timeline is visible that this farm in 1997 transformed into an organic farm and in 2004 it even transformed in a biodynamic farm. But in 2021, the certification for being a biodynamic farm was withdrawn. This was due to the fact that in that same year the farmer decided to quit with having dairy cows. This gave room for a new project, the hay drying business.

Farm(er) 2:

Farm 2 is managed by two families. One family is involved in dairy farming and a branch of arable farming for the cultivation of humane consumption potatoes. The other family is involved in the dairy industry, specifically in the cheese and dairy factory that is located on the farm. The dairy farm is the supplier for the cheese and dairy factory. Their specialty is real farm raw milk cheese. Furthermore, the family who is involved in the cheese and dairy factory, is also involved with the farm shop which is located on the farm. In this farm shop, their real farm raw milk cheese and their potatoes are sold. The assortment of the farm shop is supplemented with matching regional products. Figure 5 below shows how farm 2 has evolved over the years.

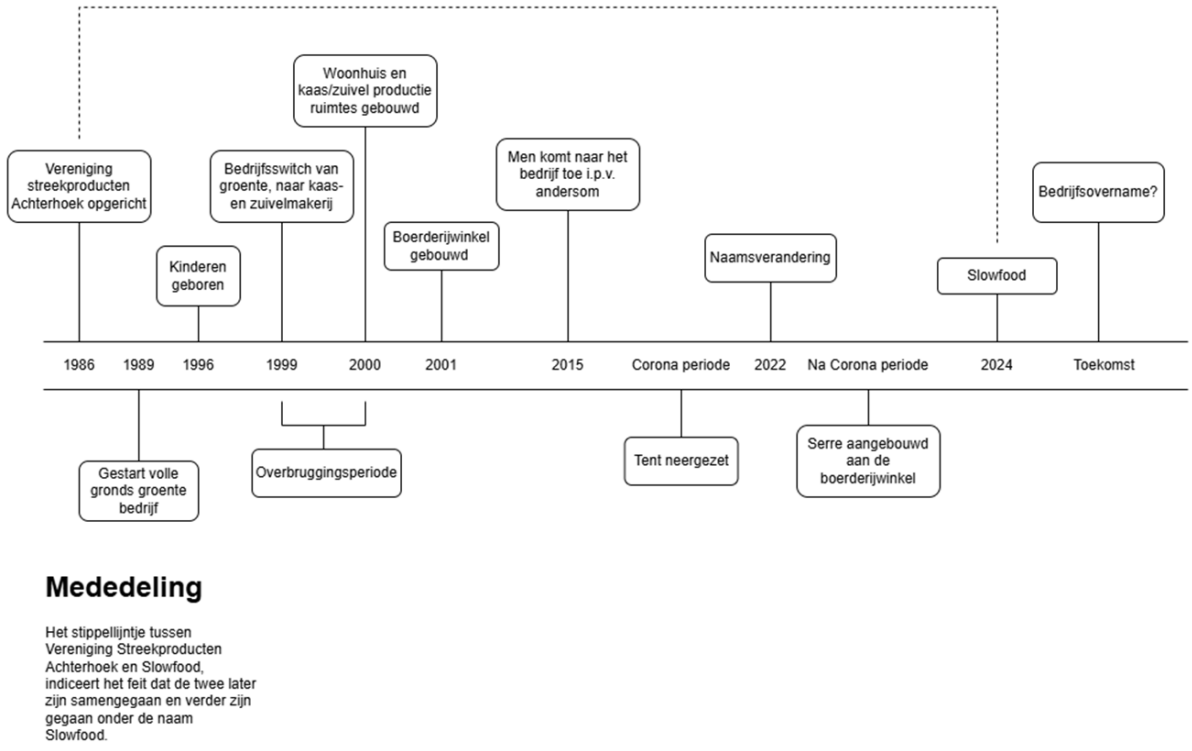

Figure 5: Timeline farm 2

Before the farmers of farm 2 decided to start with a cheese and dairy factory. They had an open field vegetable cultivation farm. The relations were geared towards this open field vegetable cultivation farm. The other part of the family already had a conventional dairy farm, they also had relations which were compatible with a general conventional dairy farm. This is illustrated in figure 6. Furthermore, the farming practices of the conventional dairy farm were comparable with the farming practices of other conventional dairy farms. Besides that, the family with the open field vegetable cultivation farm initiated an association for regional products in the Achterhoek in 1986.

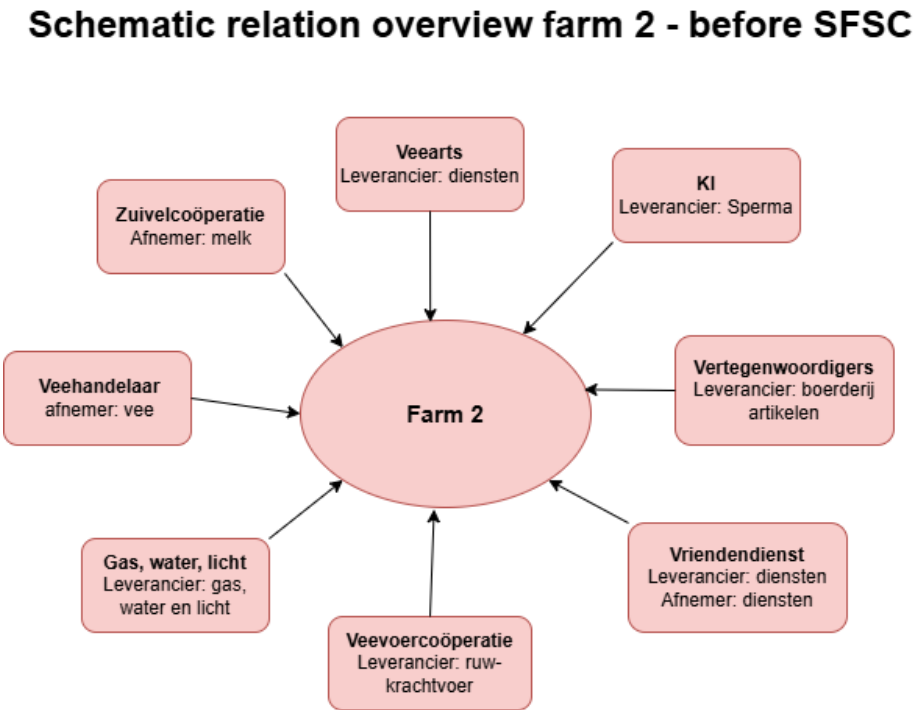

Figure 6: Schematic relation overview farm 2 - before SFSC

In 1999 a dairy and cheese producer came to the family of farm 2, with the question if they were interested in taking over his dairy and cheese business. The family of farm 2 decided to go for it and therefore they stopped with their open field vegetable cultivation farm. Between 1999 and 2000, there was a bridging period where they produced cheese and dairy products on the farm of the dairy and cheese producer who stopped. In the meantime, a cheese and dairy factory was built on farm 2. In 2000 farmer 2 and her family were able to start producing dairy and cheese products on their own farm. A year later, in 2001, the farm shop was built at the barn floor of the farm. During the corona period, the family of farm 2 decided to place a tent, to temporarily enlarge the farm shop. But after the corona period, they found out that they could no longer miss the extra space for the farm shop. Therefore, after the corona period, a conservatory was added to the farm shop. Since the start of the cheese and dairy factory, there has been a supplier for the packaging materials, rennets, fruits etc. On top of that, since the start of the farm shop, all kinds of buyers and suppliers have been added, thereby enhancing the commercial viability of the farm shop. All these new relations are illustrated in figure 7 below. Apart from the suppliers and buyers, farm 2 also has staff for the farm shop and the dairy and cheese factory. On top of that, they also have a social worker doing chores around the farm.

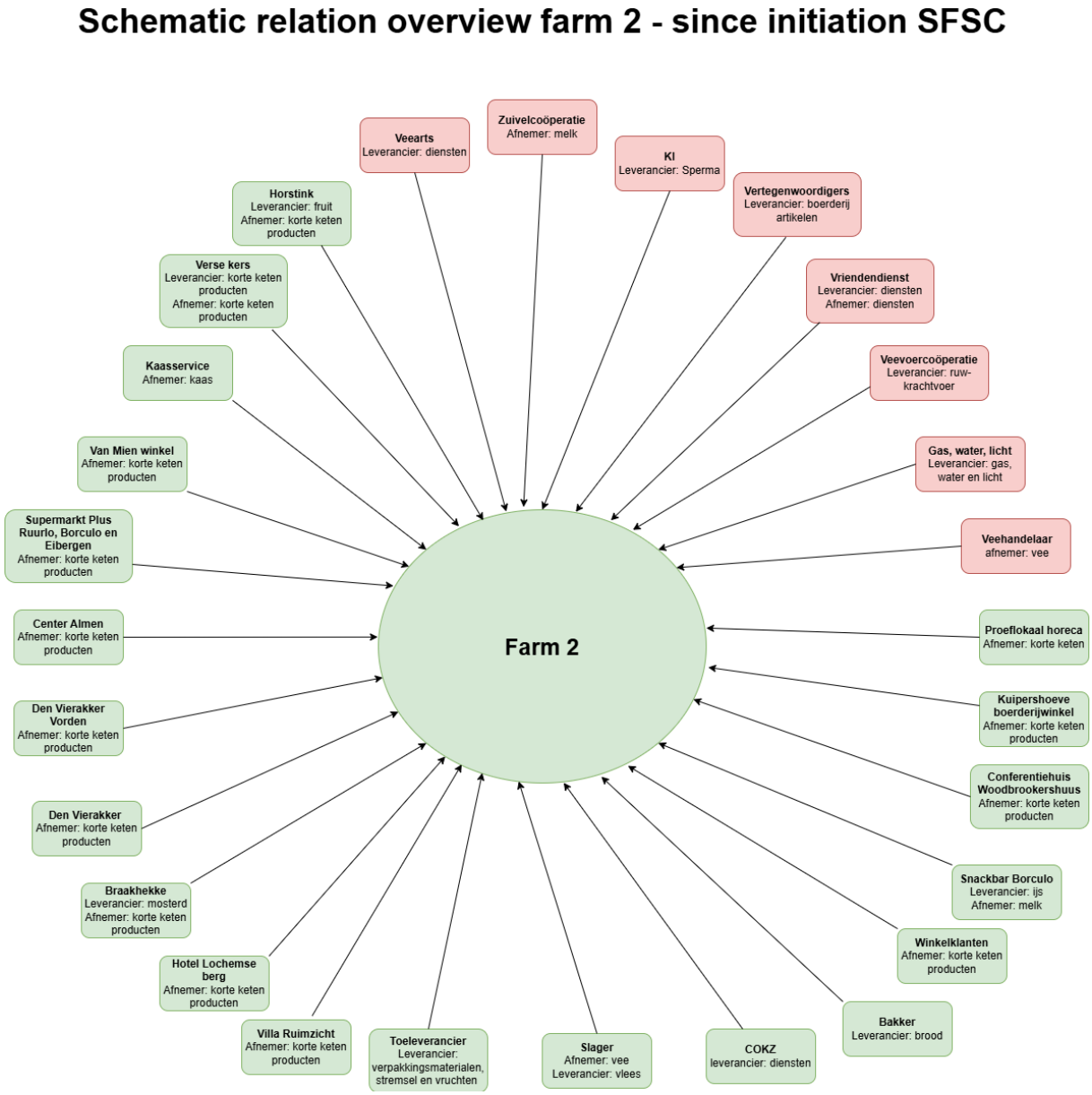

Figure 7: Schematic relation overview farm 2 - since initiation SFSC

Farm(er) 3:

Farm 3 is a conventional nature inclusive and 'dairy making' farm. It is managed by the farmer and his wife. Apart from the farm and the dairy making factory, there is a farm shop and a catering side branch present on the farm. In the farm shop they sell their own dairy, cheese and meat. On top of that, the product range is supplemented with other regional products. Figure 8 below shows how farm 3 has evolved over the years.

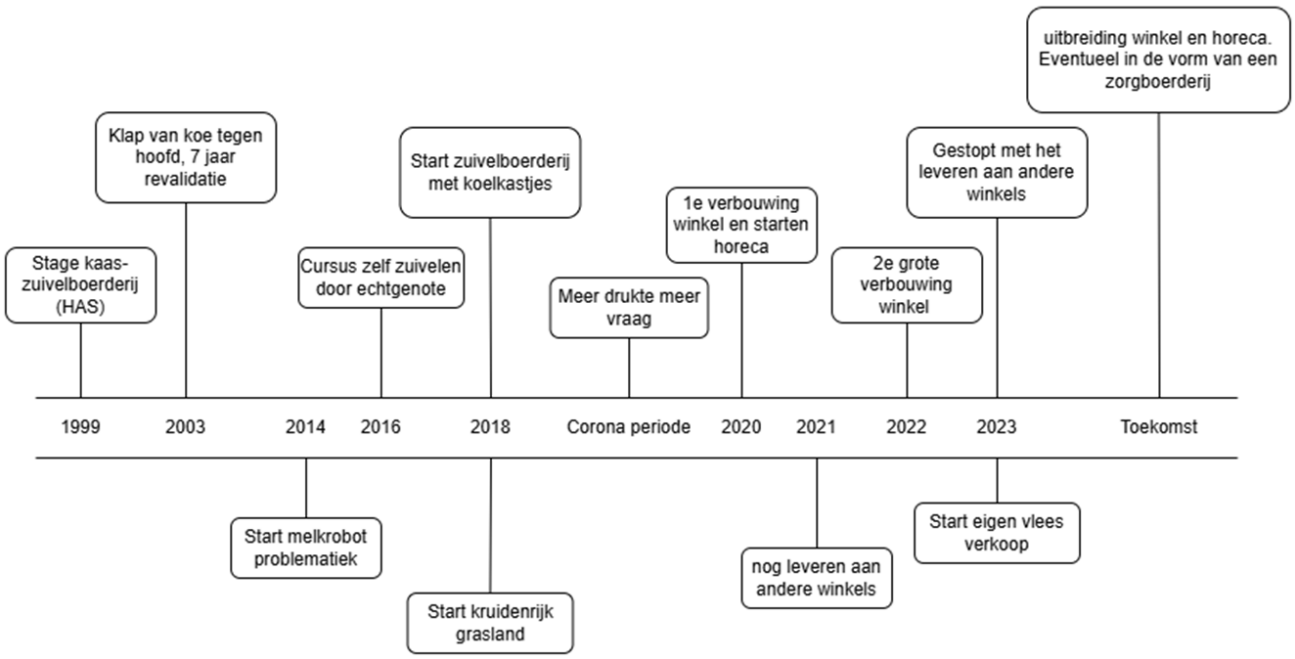

Figure 8: Timeline farm 3

Before the initiation of the SFSC, farm 3 was a conventional dairy farm. During that period, the farmer's wife worked elsewhere, and the farmer worked on the farm. The farming practices were mainly focussed on the milk production. The farmer purchased a milking robot, but issues have been encountered with it since 2014. Apart from the farming practices, the relations during that time were comparable with a conventional dairy farm. This is illustrated in figure 9 below.

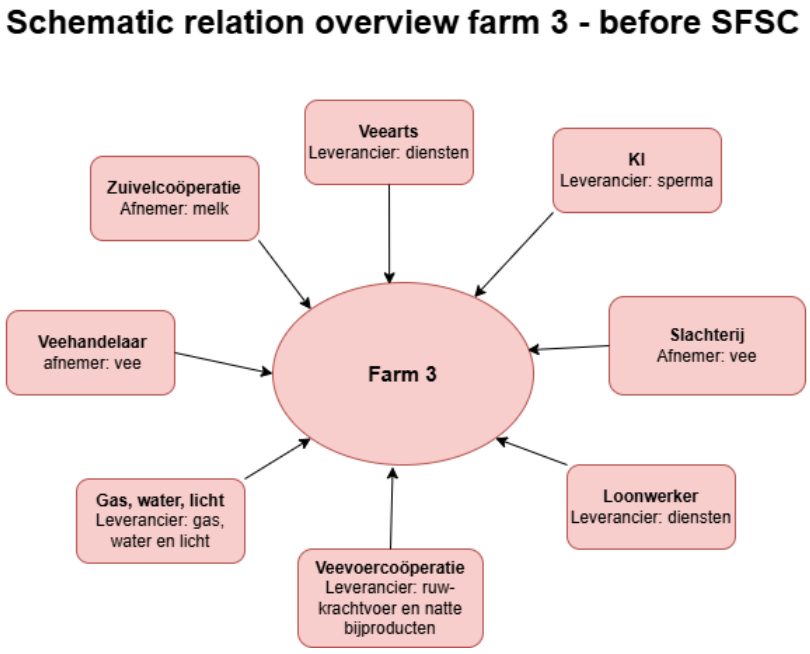

Figure 9: Schematic relation overview farm 3 - before SFSC

In 2018, farmer 3 and his family decided to start with a small SFSC, which existed out of a refrigerator placed at the barn floor, where customers could buy the dairy products. Not long before, the farmer's wife followed a course in making dairy products. She is up till now the person who makes the dairy products for the farm shop. The farmer is still responsible for the cows, but he is also responsible for the marketing and the social media of the SFSC. In 2020, the farm shop was built in the barn floor and two years later the farm shop was renovated and updated with the addition of a catering branch. Apart from the fact that the farmer and the farmer's wife both work in the farm shop, they also have hired staff to help them in the farm shop. Since the initiation of the SFSC, several types of buyers and suppliers connected with the SFSC of farm 3. For instance, a supplier for the ingredients to make dairy products or the customers of the farm shop. This is also illustrated in figure 10 below. In addition to these changes related to the SFSC, the farmer made the decision to transition to an herb-rich grassland system. Furthermore, farmer 3 succeeded in decreasing the quantity of antibiotics and pesticides used on his farm.

Schematic relation overview farm 3 - since initiation SFSC

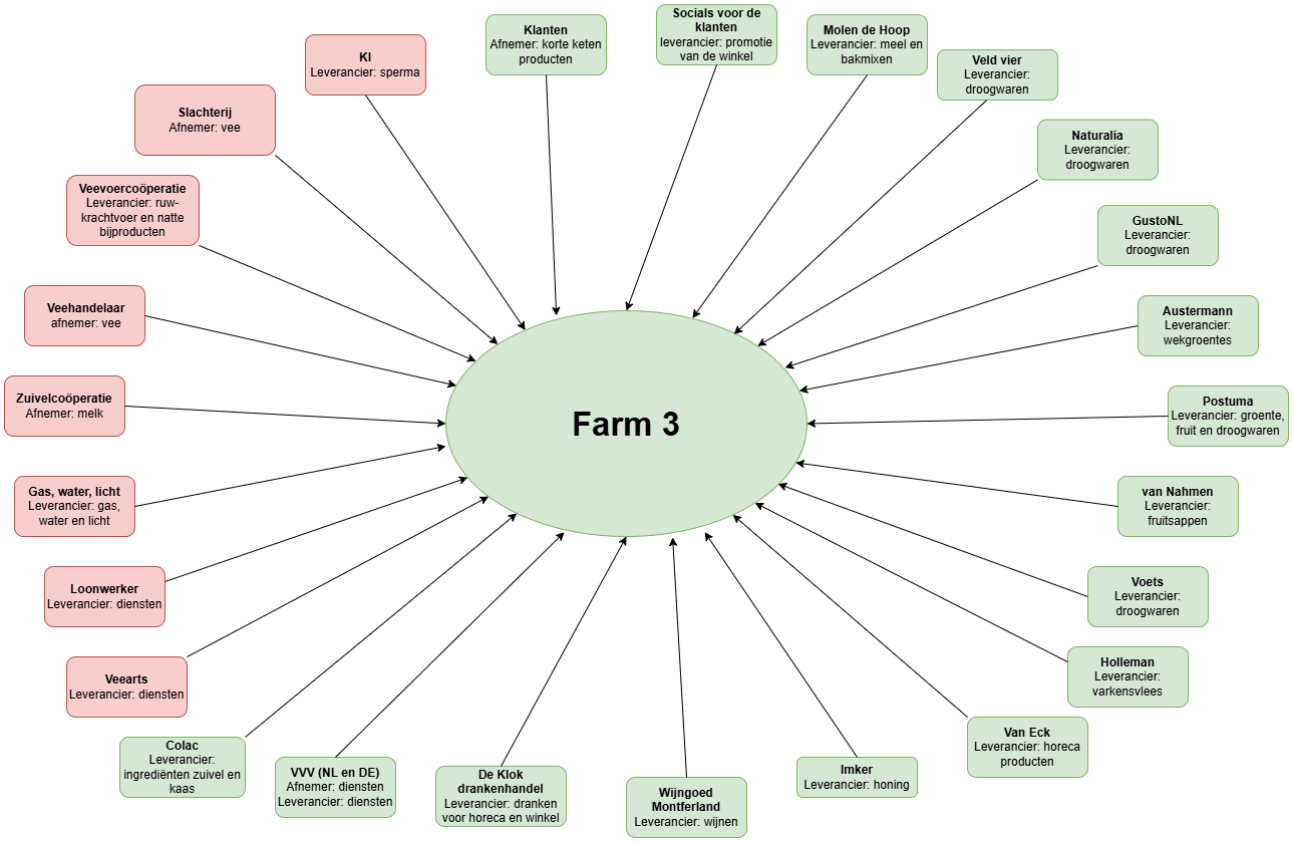

Figure 10: Schematic relation overview farm 3 - since initiation SFSC

Farm(er) 4:

Farm 4 is currently an extensive beef farm with a specialisation in the breed Blonde d'Aquitaine. The cattle graze in nature reserves for a significant proportion of the year. In this manner, the cattle contribute to nature management. The meat is certified with a two-star better life quality mark from the animal protection in the Netherlands. The meat products are available for purchase at wholesale companies, supermarkets, farm shops and via a network. Figure 11 below shows how farm 4 has evolved over the years.

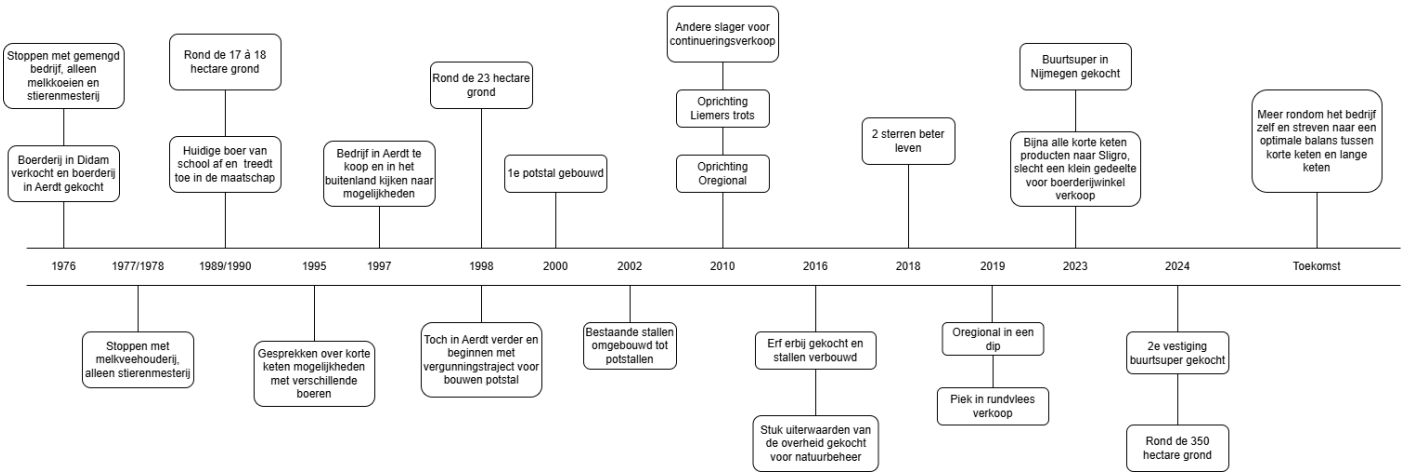

Figure 11: Timeline farm 4

Farm 4 was originally a conventional dairy farm with a beef farming branch. Due to health reasons the family of farm 4 stopped with the dairy farm branch. But they continued with the beef farm. Around 1990, the current farmer and his parents entered into a partnership. From that moment on, the current farmer not only worked on the farm, but also elsewhere in order to make the farm financially stable. The beef farm around that time was comparable to a classic intensive beef farming system. The cows for instance were kept in sheds on grids. The relations connected to farm 4 were comparable to other intensive beef farms during that time. This is also illustrated in figure 12 below. Furthermore, the farming practices were also comparable with the farming practices of an intensive beef farming system.

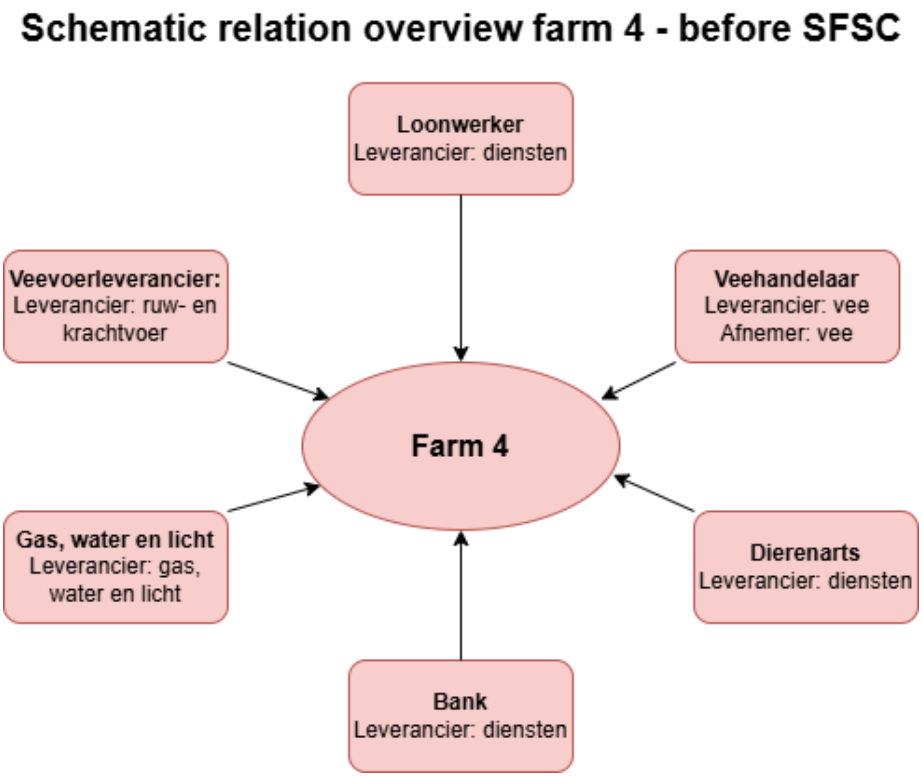

Figure 12: Schematic relation overview farm 4 - before SFSC

During the same period of the partnership around 1990, other things changed on farm 4 as well. First of all, around 1990 farm 4 started supplying beef directly to a local butcher. This was the beginning of the SFSC. Later, the sheds on grids were replaced and renovated with straw sheds, which are considered more animal friendly. In addition, farmer 4 connected with land and nature management organisations, like for instance Staatsbosbeheer. This resulted in partnerships whereby farmer 4 was allowed to let his cattle graze on the plots of the land and nature management organizations. Over time, these partnerships grew, and farmer 4 could lease more plots from the land and nature management organizations. Moreover, farmer 4 also bought more land himself over the years. Furthermore, a farm shop was created at the farm, where the produced beef was sold. In addition, free-range pork from another farm was sold in the farm shop as well. In 2018, farmer 4 received a two-star better life quality mark from the animal protection in the Netherlands. Over the years, the farming practices have changed due to the initiation of the SFSC, but also due to the adoption of another farming method. Apart from the relations which are directly related to the farm, new relations appeared since the beginning of the SFSC. This is also illustrated in figure 13 below. Moreover, in 2010 farmer 4 was one of the co-founders of a network. This network offered the opportunity for farmer 4 to sell his produce via the network to catering, healthcare institutions and customers. However, the challenge with the network was to ensure a continuity in supply. As a result of this, farmer 4 switched to another butcher for logistic choices

Schematic relation overview farm 4 - since initiation and participation SFSC

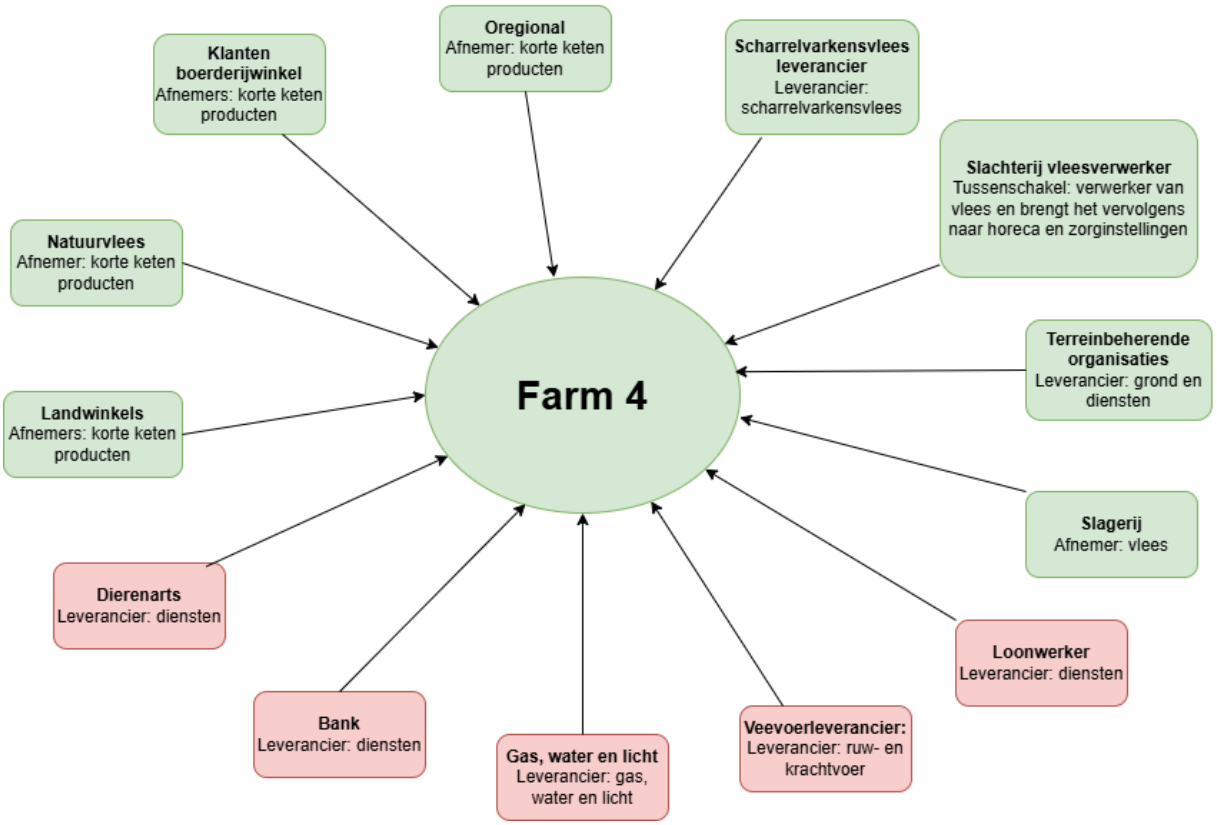

Figure 13: Schematic relation overview farm 4 - since initiation and participation in a SFSC

During the Covid period the catering and healthcare institutions stopped purchasing products via the network. Resulting in minimal sales for farmer 4 towards the network. Partly because of this, farmer 4 decided to switch back towards a longer chain. Farmer 4 quitted with delivering products to other farm shops. Consequently, farmer 4 started to deliver his products to wholesale companies, thereby extending the value chain. Lastly, farmer 4 also stopped with selling free-range pork from another farmer. These evolvements in relations towards a longer value chain is also illustrated in figure 14 below.

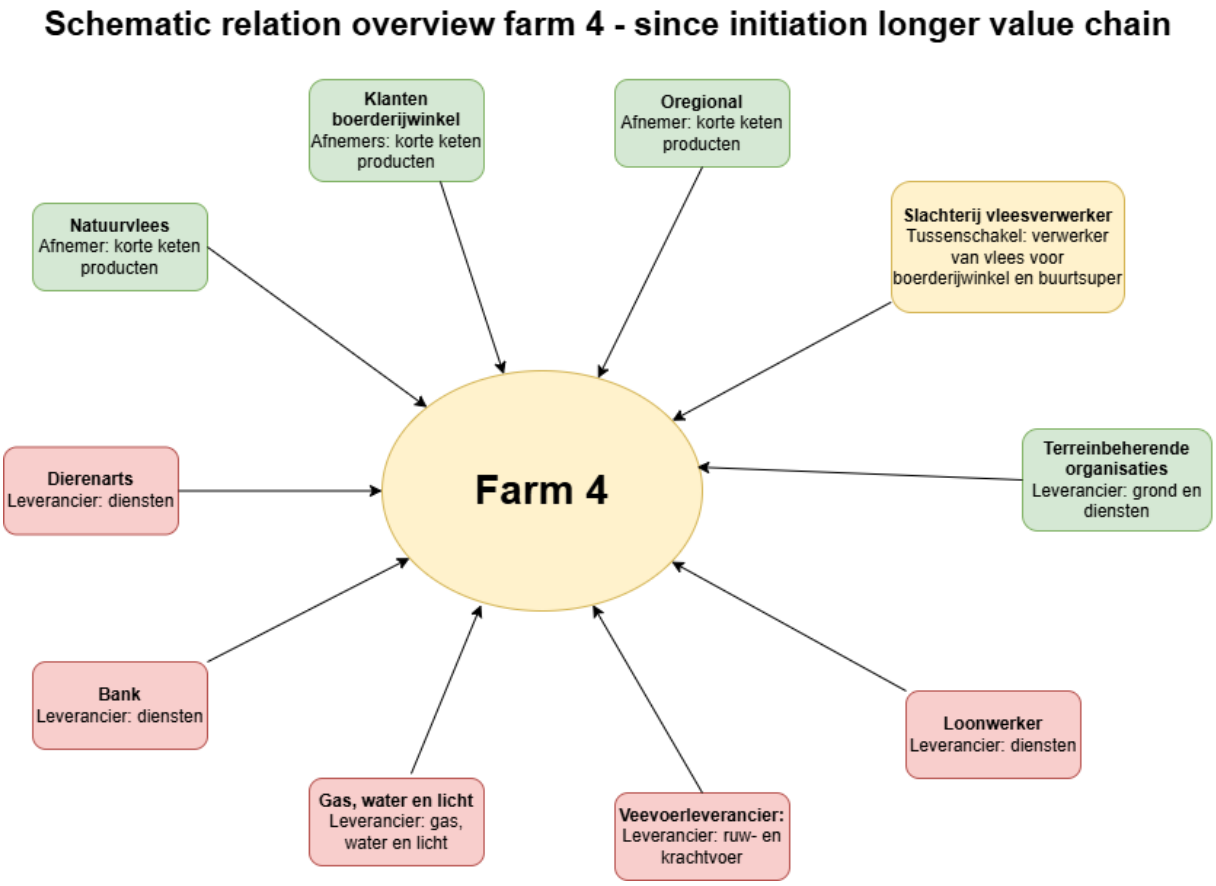

Figure 14: Schematic relation overview farm 4 - since initiation longer value chain

Farm(er) 5:

Farm 5 is a conventional mixed farm, with cows and pigs. Furthermore, part of the produced milk is processed into dairy products, such as yoghurt and buttermilk. These products are sold to a network, wholesale companies and supermarkets. In addition, they own a so called 'Melkhuisje', which is a self-service shop, where you can buy their SFSC products and dairy products from other producers as an addition to their own products. Figure 15 below shows how their farm has evolved over the years.

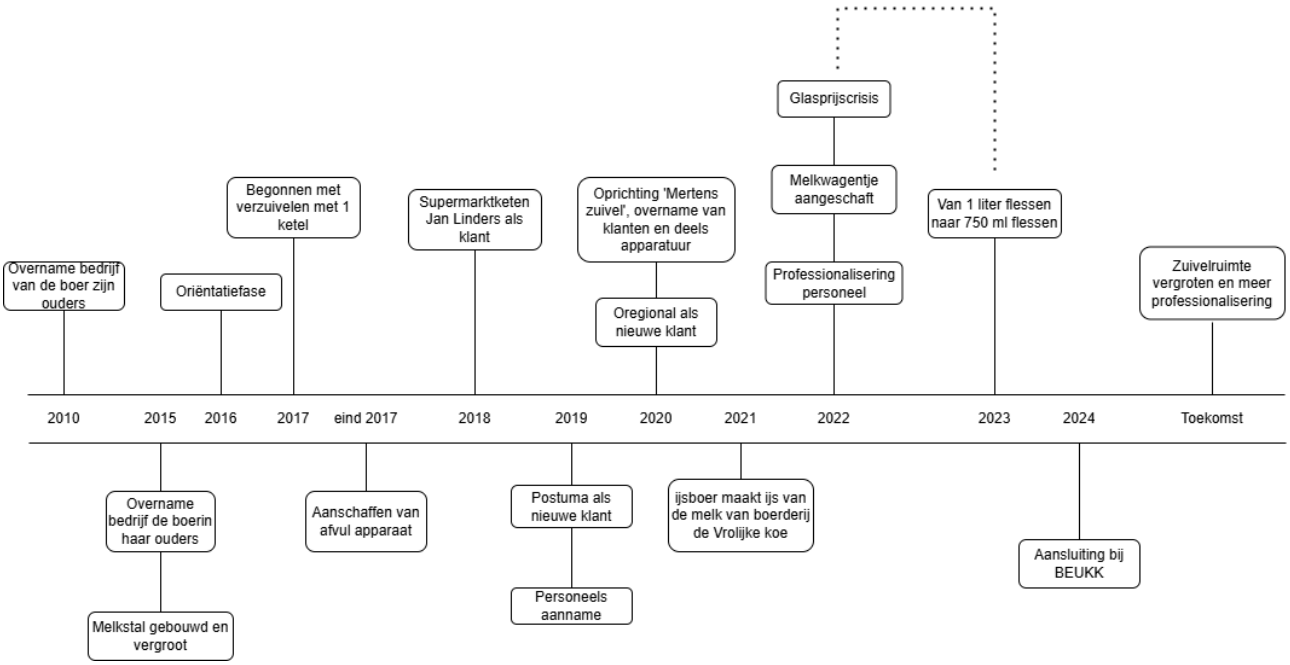

Figure 15: Timeline farm 5

Farmer 5 and the farmer's husband both originate from dairy farms. In 2010, the farmer's husband took over the farm from his parents. Later in 2015, the livestock of the parents from farmer 5 was amalgamated with the livestock of the farmer's husband. During that same time, a new and larger milking parlor was built. Furthermore, the relations and farming practices during that period were comparable to other conventional mixed farms. These relations are also illustrated in figure 16 below.

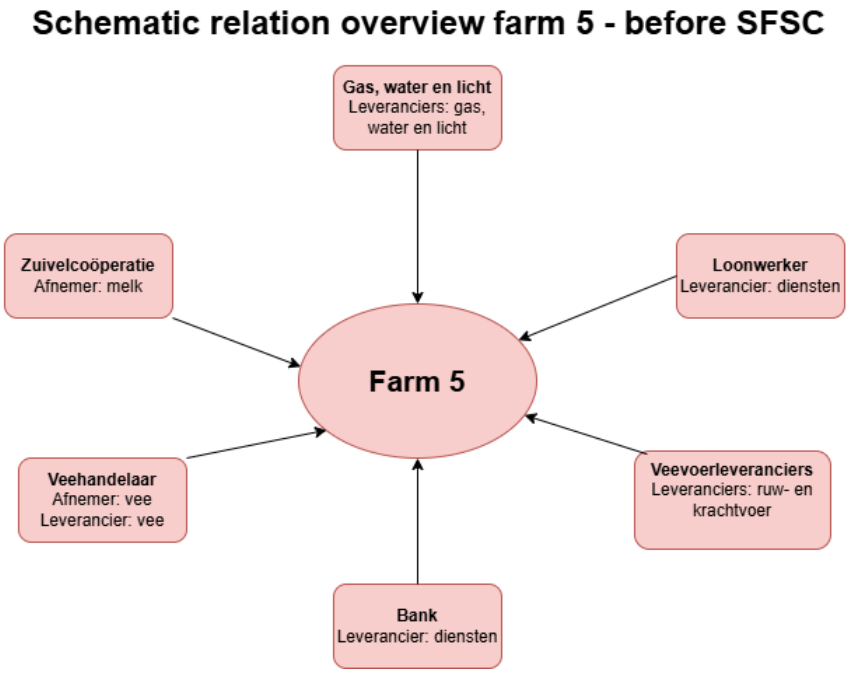

Figure 16: Schematic relation overview farm 5 - before SFSC

In 2016 the family of farmer 5 got acquainted with a farmer who already processed his own milk into dairy products. This farmer was so inspiring for farmer 5 and her husband, that they decided to start producing their own dairy products in 2017. In the beginning they started quite small, with just 1 boiler. Later that year they purchased a filling machine. Over the years the production volume of the SFSC has grown. Consequently, more machinery and equipment for all the dairy making was purchased and everything became more professional. In addition to that, a self-serving shop was built at the farm, which they call the 'Melkhuisje'. The amount of workload became too much, therefore staff was hired as well for the dairy making as for the farm. The practices of farmer 5 became more management and administratively oriented. The husband of farmer 5 started with delivering their SFSC products to their buyers. Farm 5 also got acquainted with new relations. First of all, they are connected to a supplier for the ingredients to make dairy products, with a supplier for the machinery for producing dairy products, and with a supplier for additional dairy products which are sold in the 'Melkhuisje'. However, they also connected with buyers, like supermarkets, wholesale companies and an icemaker. The relations directly linked to the farm stayed the same over the years. These relational changes of farm 5 are illustrated in figure 17 below.

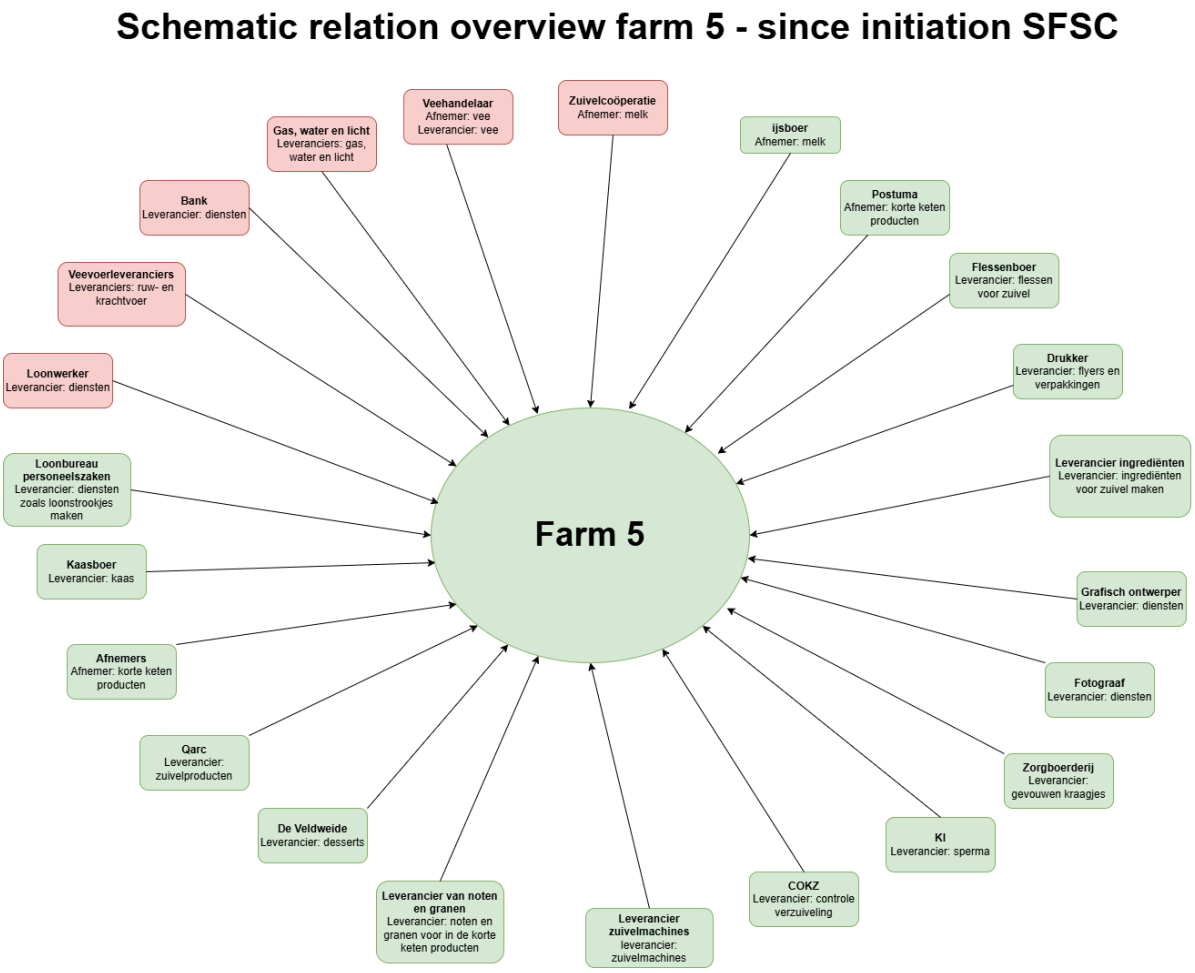

Figure 17: Schematic relation overview farm 5 - since initiation SFSC

Apart from supermarkets and wholesale companies, who became buyers, in 2020 a network also became a buyer of the SFSC products of farm 5. This network is actually a smaller buyer compared to other buyers. Therefore, the network itself is not much of an influence on farm 5. Rather, it were all the buyers together that made the growth for the SFSC of farm 5 possible and this network happens to be one of them. This relational change is also illustrated in figure 18 below.

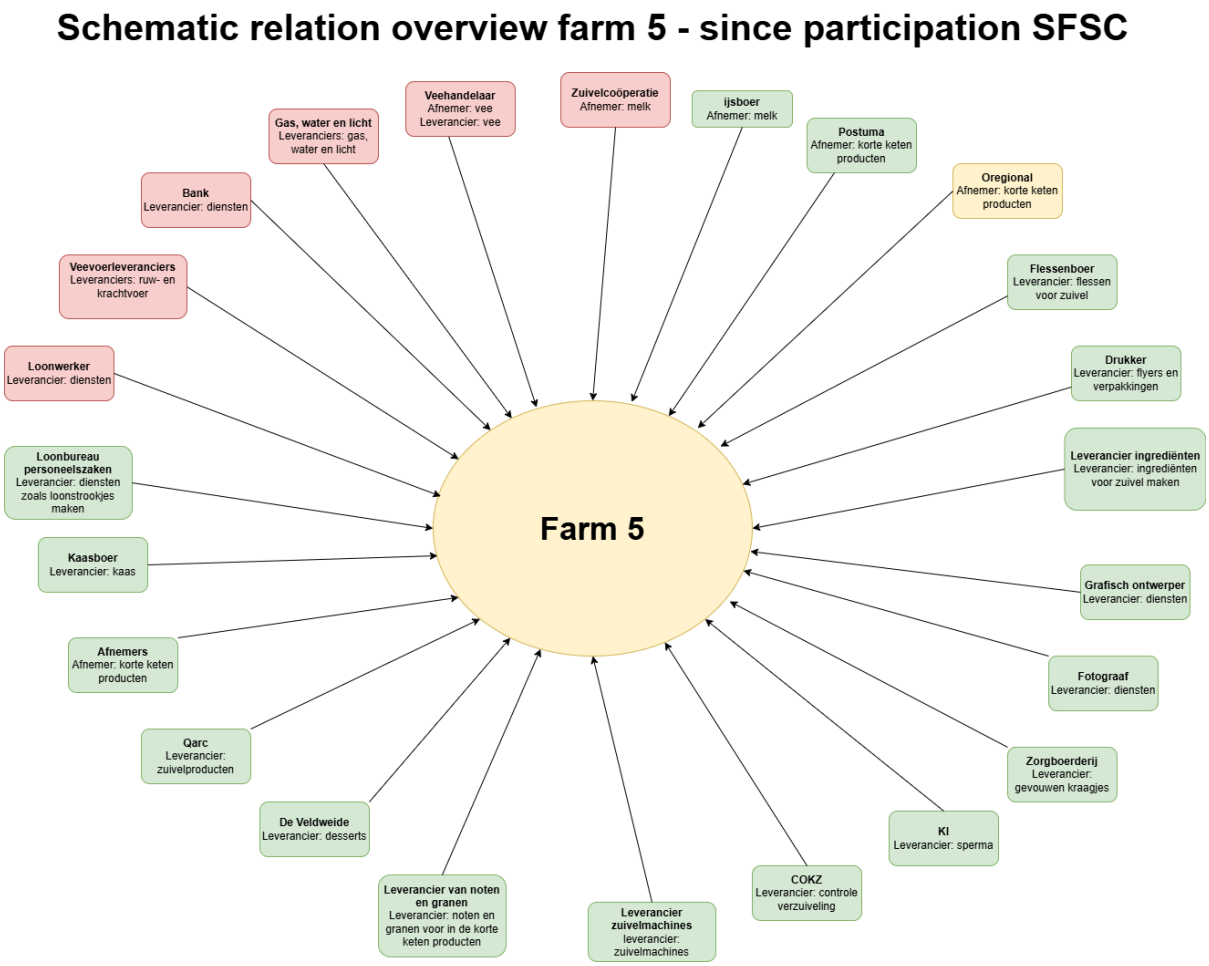

Figure 18: Schematic relation overview farm 5 - since participation SFSC

Farm(er) 6:

Farm 6 is a conventional buffalo dairy farm, which is managed by the farmer and his wife. Next to the farm, a dairy factory is located, which is managed by the farmer's brother. The buffalo milk is directly transported to the dairy factory, where it is processed into buffalo dairy products, such as mozzarella. A farm shop is located on the farm, which is managed by the farmer's wife. Here the buffalo dairy products are directly sold to customers, along with additional SFSC products from other farmers and producers. Furthermore, the buffalo dairy products are sold to restaurants, other farm shops and a network. Figure 19 below shows how farm 6 has evolved over the years.

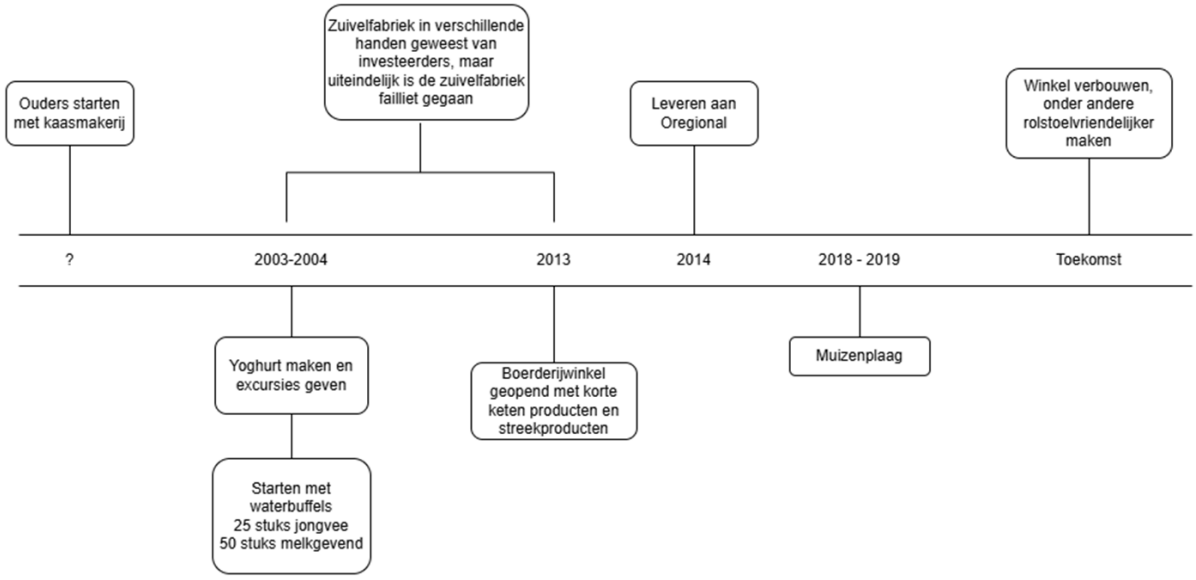

Figure 19: Timeline farm 6

Before the introduction of the buffalos and the SFSC, farm 6 was a conventional dairy farm. The farm practices and the relations during that period were quite similar to a comparable conventional dairy farm. This is also illustrated in figure 20 below.

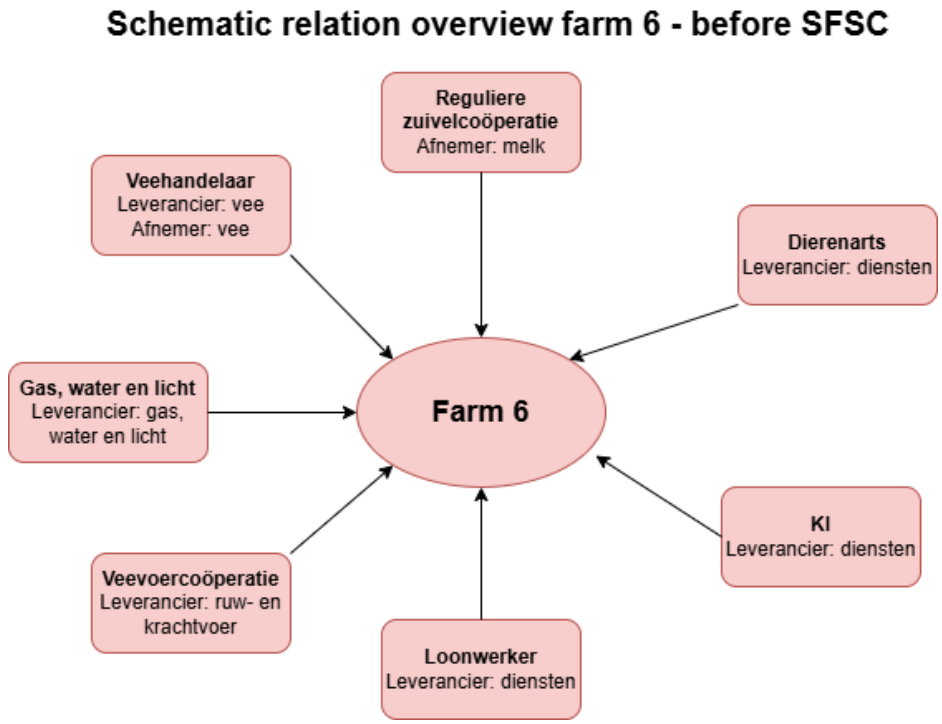

Figure 20: Schematic relation overview farm 6 - before SFSC

Due to new fat quota rules by the Dutch government, farmer 6 was allowed to keep 30 dairy cows instead of the 80 dairy cows they had around that time. This was the trigger to make the switch from dairy cows to water buffalos. With the introduction of the water buffalos in 2003, most relations stayed intact. With the exception of the dairy cooperative, because it did not accept buffalo milk. Instead, the brother of farmer 6 started to use the buffalo milk for the cheese factory. Apart from that, a lot of the farm practices stayed the same. However, the usage of antibiotics decreased since the introduction of the water buffalos. In 2003 the was no physical shop, but the buffalo dairy products were already sold to customers and parties. Besides that, excursions were organized on the farm, to get people acquainted with the water buffalos and the farm. In 2012, the farmer's wife quitted with her regular job due to health reasons. Instead, she decided to open a farm shop on the farm in 2013. With the introduction of the farm shop, new relations occurred. New local suppliers supply local SFSC products to increase the product range of the farm shop. Besides that, buyers like regular customers, restaurants and other farm shops also became acquainted with farm 6. In addition to the relations, there has been contact with a butcher as an intermediary, since the start of the SFSC. The new and changed relations are illustrated in figure 21 below. Around 2018/2019 the meadows of farm 6 suffered from a mouse plague. Because of this, the farmer decided to introduce herb-rich grassland into his land. In addition to that, the usage of pesticides also decreased.

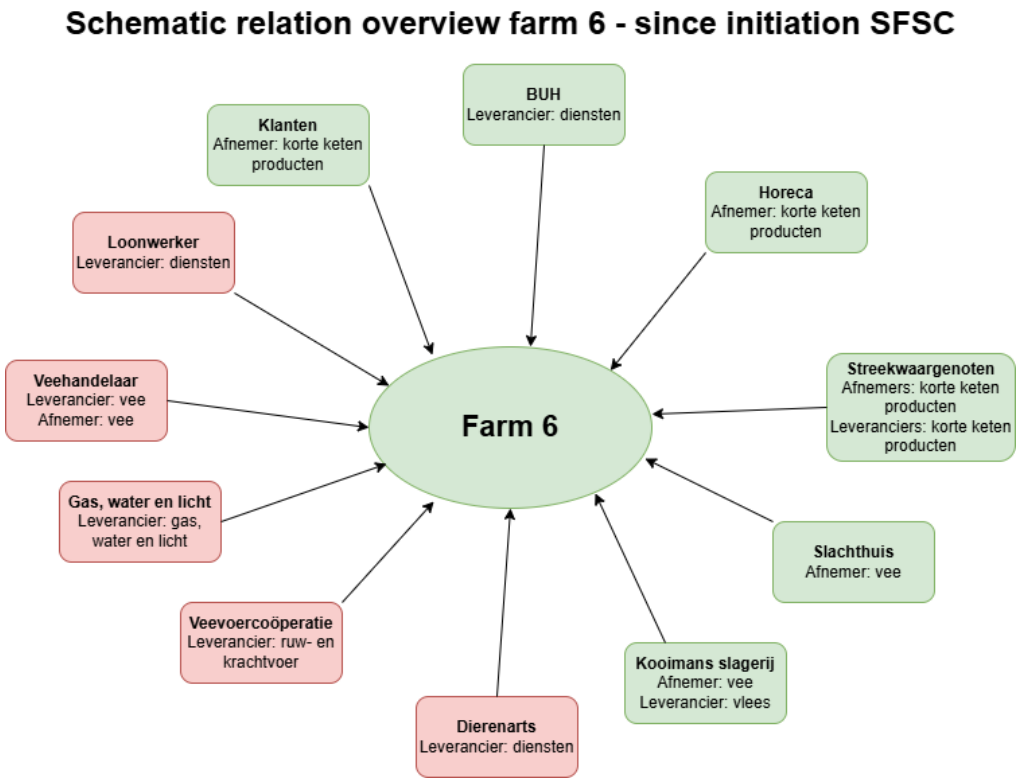

Figure 21: Schematic relation overview farm 6 - since initiation SFSC

In 2014, a network contacted farm 6 if they could buy their SFSC products. Farmer 6 and his wife decided to accept the offer. Farmer 6 and his wife view the network simply as one of their bigger customers. With the introduction of the network, farm 6 stayed the same, except for the new relation between farm 6 and the network. This is also illustrated in figure 22 below.

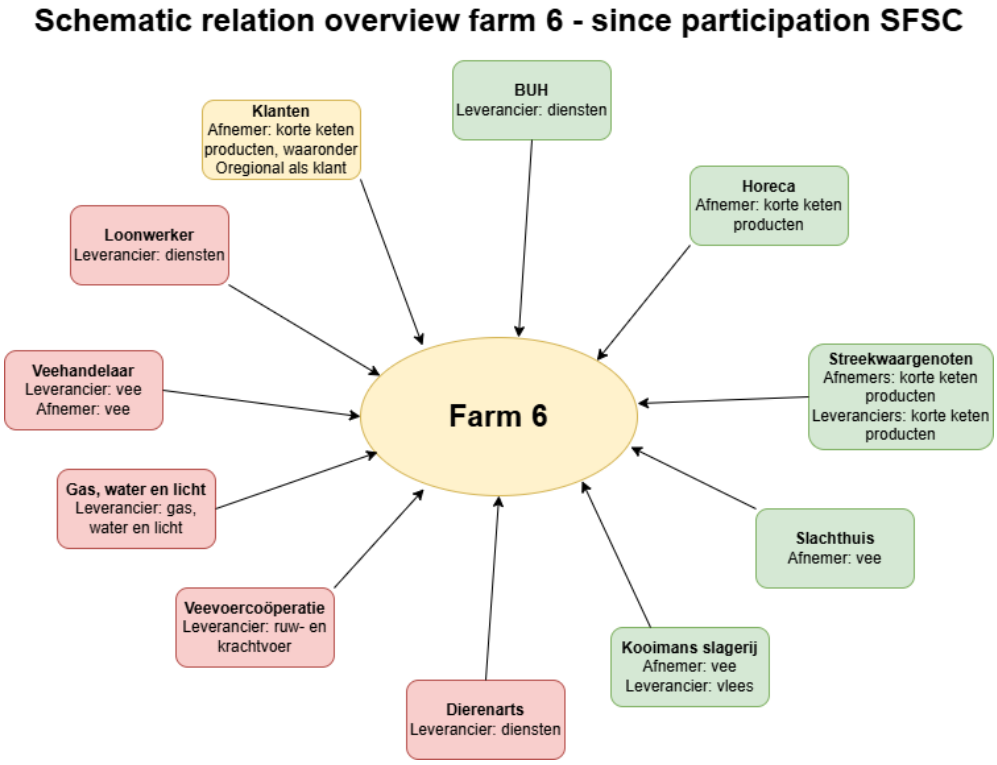

Figure 22: Schematic relation overview farm 6 - since participation SFSC

Farm(er) 7:

Farm 7 is currently a modern dairy farm with a cheese factory and a farm shop. The farm is managed by 2 brothers, who took over their parent's farm business. In the farm shop self-produced cheese, milk, dairy products, liquors, soups and meat are sold. The product range is complemented by other regional local products and with products from a cooperative from which farm 7 is a member of. In addition to that, several activities are organized on farm 7 like, excursions, playing farmer's golf, following workshops etc. Lastly, there is also a catering facility next to the farm shop. All this makes farm 7 a modern and multifunctional 'dairy and cheese making' farm. Figure 23 below shows how farm 7 has evolved over the years.

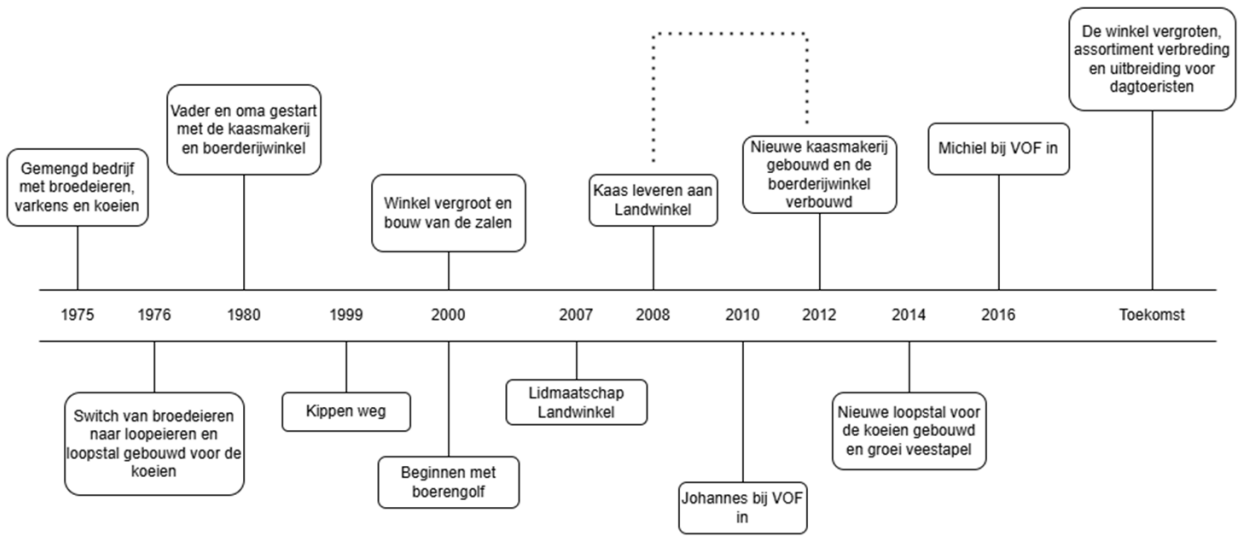

Figure 23: Timeline farm 7

Before farm 7 initiated the SFSC, the farm was a conventional mixed farm with hatching eggs, pigs and cows. The relations and farming practices were comparable with that of a comparable conventional mixed farm. It was mainly focused on productivity and efficiency. These relations are illustrated in figure 24 below.

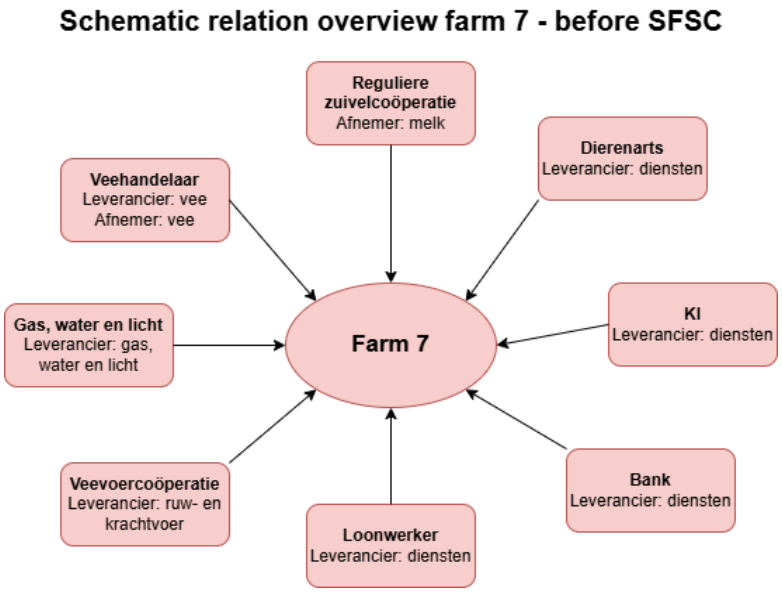

Figure 24: Schematic relation overview farm 7 - before SFSC

In 1980, an SFSC on farm 7 was introduced by the farmer's father and grandmother. The family of farmer 7 started with producing their own cheese and sold it directly in their farm shop. Over time, the hatching eggs and the pigs were withdrawn from the farm. With the introduction of the SFSC new relations occurred like suppliers with products for the farm shop, buyers of the farm shop products and staff was hired for the cheese factory and the farm shop. In 2000, the farm shop underwent expansion, with the addition of rooms to receive groups. With all these relational and physical changes, the farming practices changed with them. Examples of such new farming practices include the operation of the farm shop and the production of cheese in the cheese factory. All in all, the relational changes since the initiation of the SFSC on farm 7 are illustrated in figure 25 below.

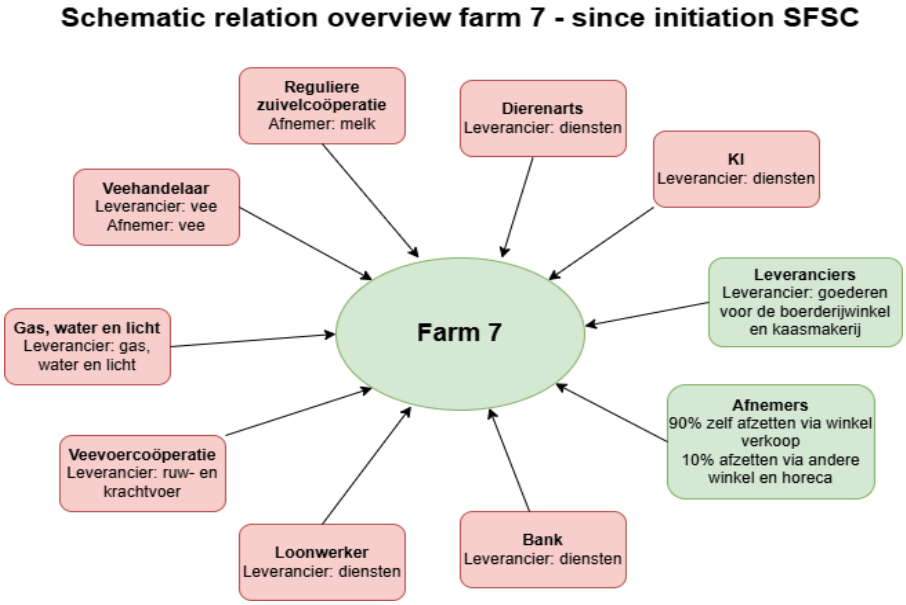

Figure 25: Schematic relation overview farm 7 - since initiation SFSC

In 2007 the family of farm 7 decided to become a member of a cooperative that facilitates the collective sale of SFSC products. In addition to the fact that farm 7 purchases products for the farm shop via the cooperative. Farm 7 also supplies cheese to the cooperative. In combination with the overall growth of farm 7 and its SFSC business, this new relation with the cooperative gave the impetus for the construction of a new and modern cheese factory. The cheese factory has been designed in such a manner that the cheese-making process is now predominantly automatic. Furthermore, the farm shop has undergone renovations and expansion once again. In addition to that, a new shed for the cows was build too. Due to the growth of the SFSC business of the farm, more staff has been hired over time for the cheese factory and the farm shop. Lastly, the farmer himself and his brother joined the family farm's partnership. All in all, the relational changes since the participation in a cooperative are illustrated in schematic relation overview 26 below.

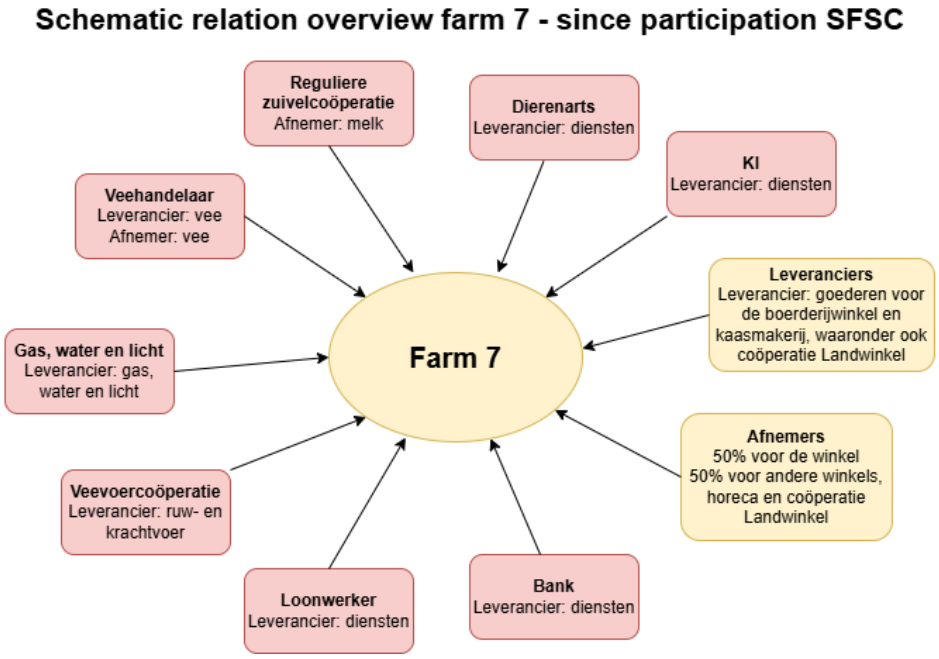

Figure 26: Schematic relation overview farm 7 - since participation SFSC

Farm(er) 8:

Farm 8 is a conventional multifunctional 'dairy and cheese making' farm and is managed by the farmer and his wife. In addition to the dairy farm, the farm business also includes a cheese factory and a farm shop. The farm shop retails a range of products, including their own dairy, cheese and meat. But also, other SFSC products sourced from local producers. Furthermore, the range of products is expanded by products from a cooperative. Figure 27 below shows how farm 8 has evolved over the years.

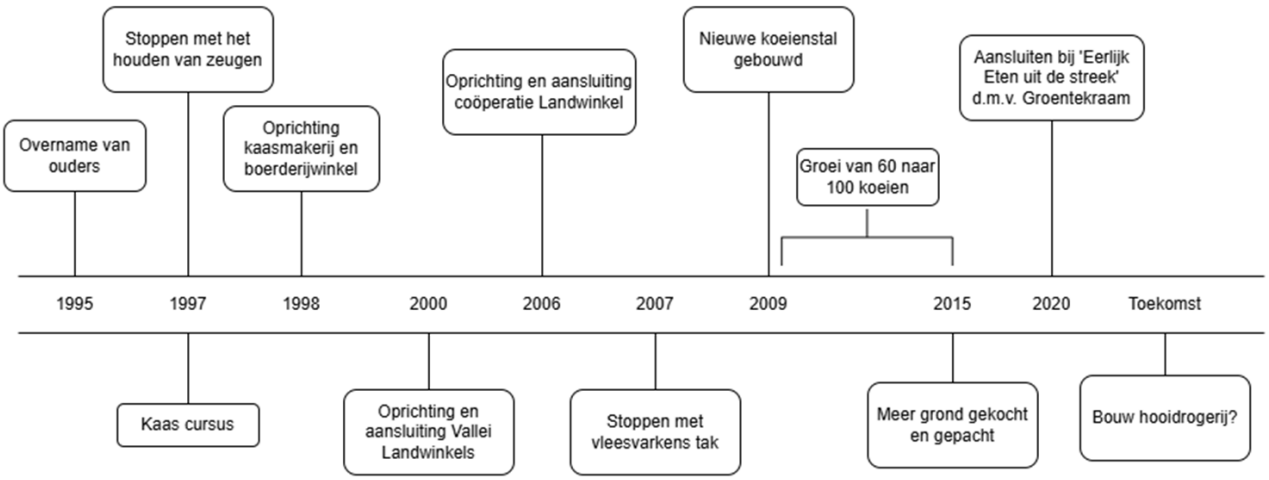

Figure 27: Timeline farm 8

In 1995 the farmer and his wife, took over the farm of his parents. During that time, the farm was a conventional mixed farm with pigs and cows. The relations and farming practices were comparable with that of other conventional mixed farm. This is also illustrated in figure 28 below. Furthermore, in 1997 the farmer decided to withdraw the sows and only to go further with the cows and the meat pigs. Because of this, the relations and the practices related to the sows were brought to a halt.

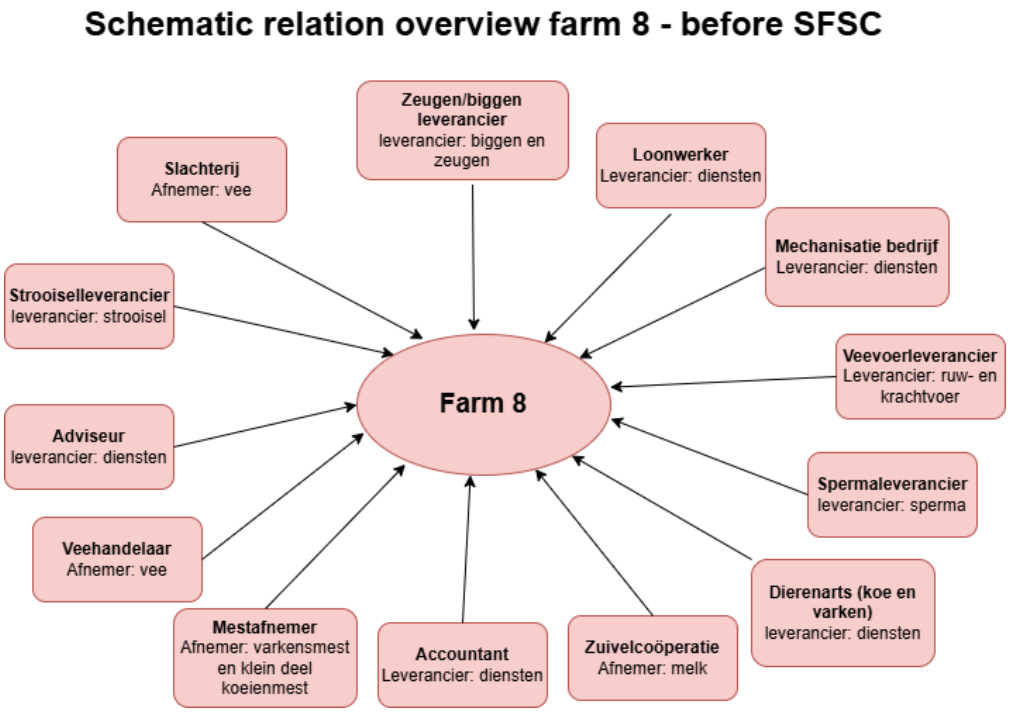

Figure 28: Schematic relation overview farm 8 - before SFSC

In 1998, the farmer and his wife decided to start a cheese factory and a farm shop, which was the beginning of the SFSC. This came with new practices, like for instance producing cheese and managing the farm shop. The relations expanded with local SFSC product suppliers, but also with buyers such as customers and restaurants. The relational changes are illustrated in figure 29 below. Furthermore, in 2000 the farmer and his wife were amongst others the co-founders of a partnership between farmers in their region.

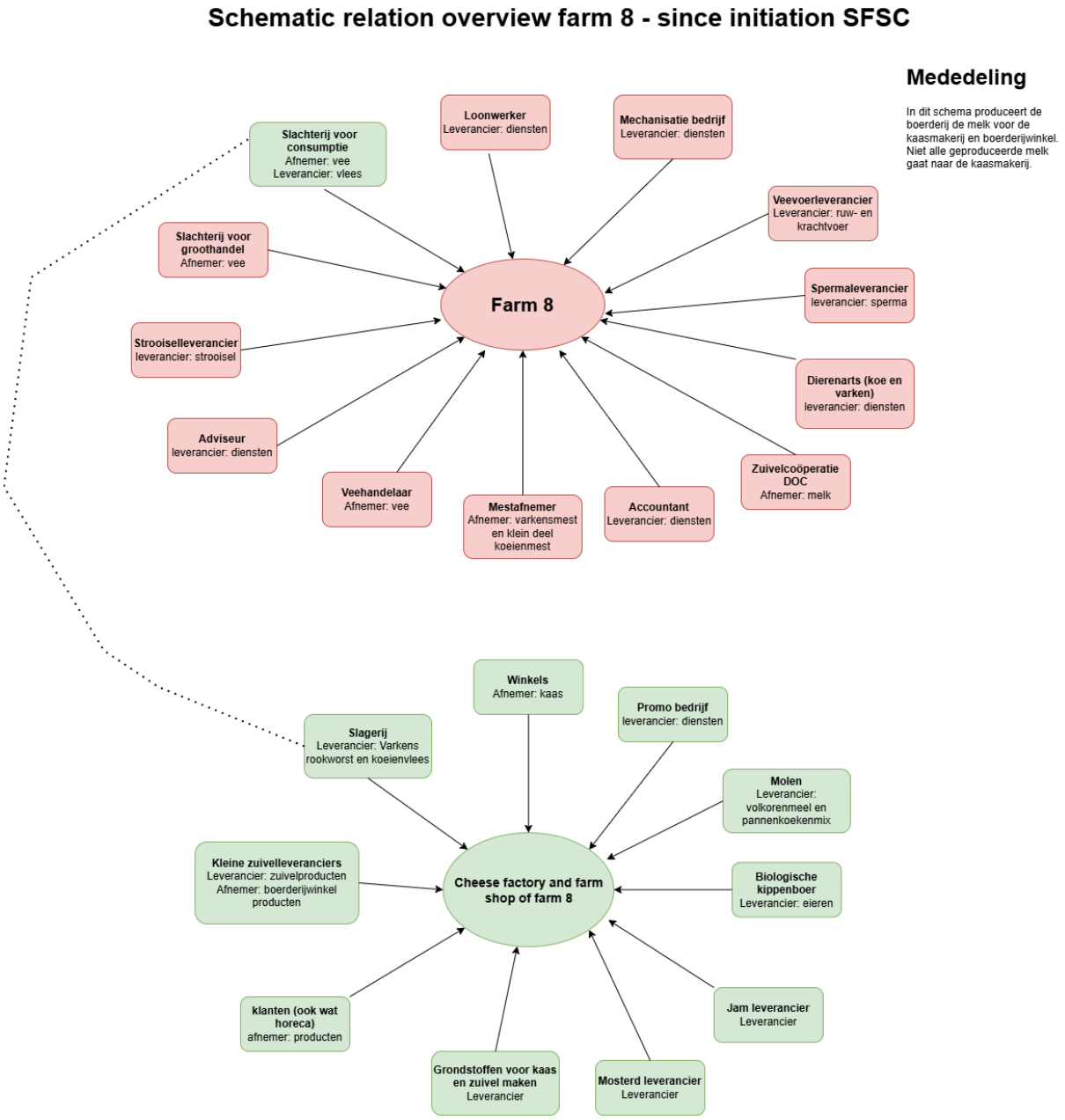

Figure 29: Schematic relation overview farm 8 - since initiation SFSC

In 2006 this previously mentioned partnership sub-merged with other partnerships and became a cooperative. The farmer and his wife became members of the cooperative, since its founding. The membership of the cooperative offered logistical advantages and access to a wider product range for the farm shop. In addition, a separate advertising company was no longer necessary, because the cooperative provides advice on that topic as well as on the farm shop design. Furthermore, other suppliers of SFSC products also connected with farm 8. Apart from that, the relations related directly to the farm, hardly changed. All these relations and relational changes are illustrated in figure 30 below. Moreover, the farming practices directly related to the farm also hardly changed. Most changes in farming practices are related to the SFSC business.

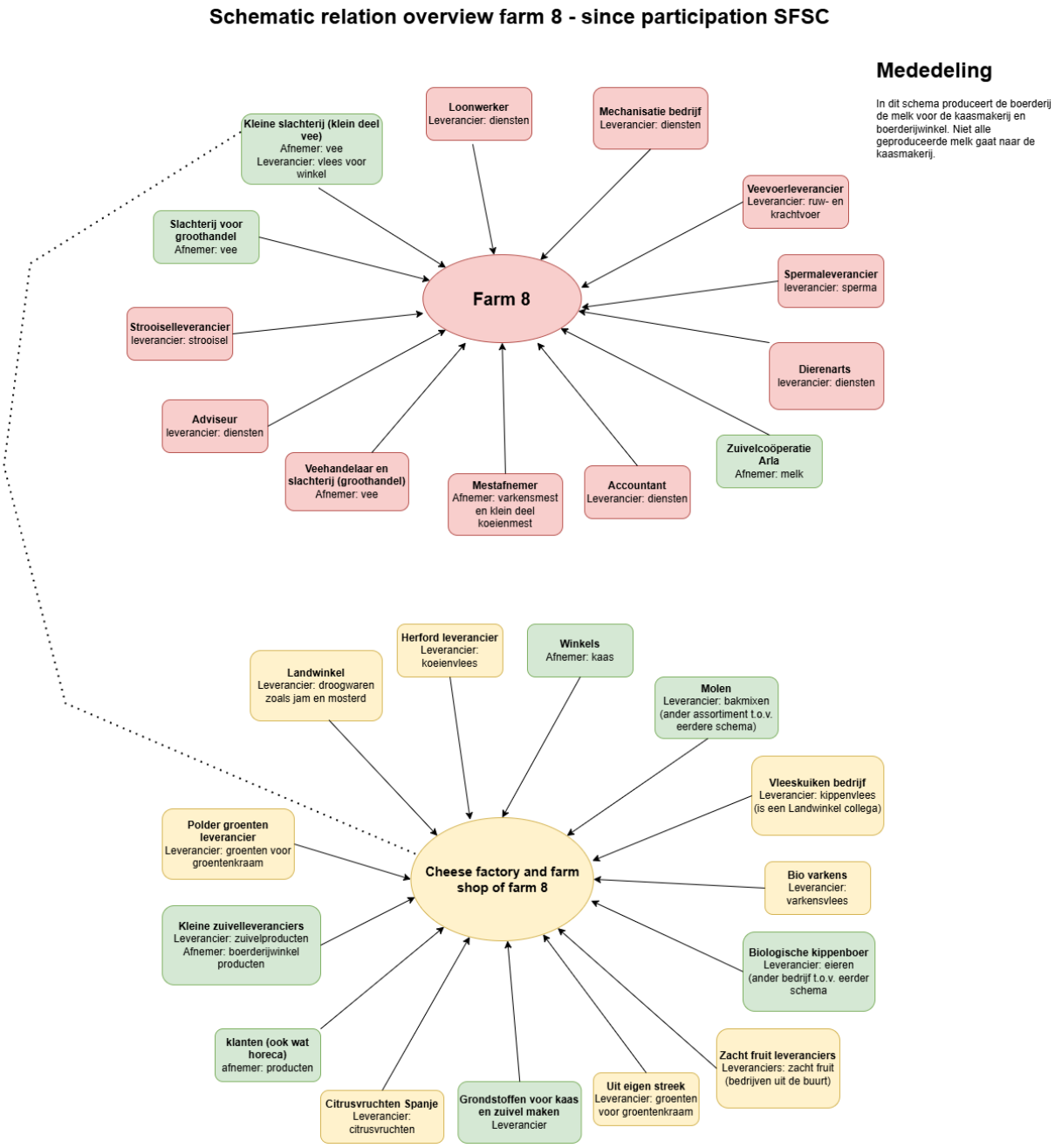

Figure 30: Schematic relation overview farm 8 - since participation SFSC

Farm(er) 9:

Farm 9 is a multifunctional conventional 'dairy and cheese making' farm, which is managed by the farmer and his wife. In addition to the dairy farm, the farm also includes a dairy and cheese factory, a farm shop, and a horse boarding stable. In the farm shop self-produced cheese and dairy products are sold. Furthermore, the product range is expanded with other SFSC products from local producers and with products from a cooperative from which farm 9 is a member of. Apart from that, the farmer and his wife also have a second dairy farm at a different location. Notably, their son is involved in the partnership associated with this second dairy farm. Al in all, figure 31 below shows how farm 9 has evolved over the years.

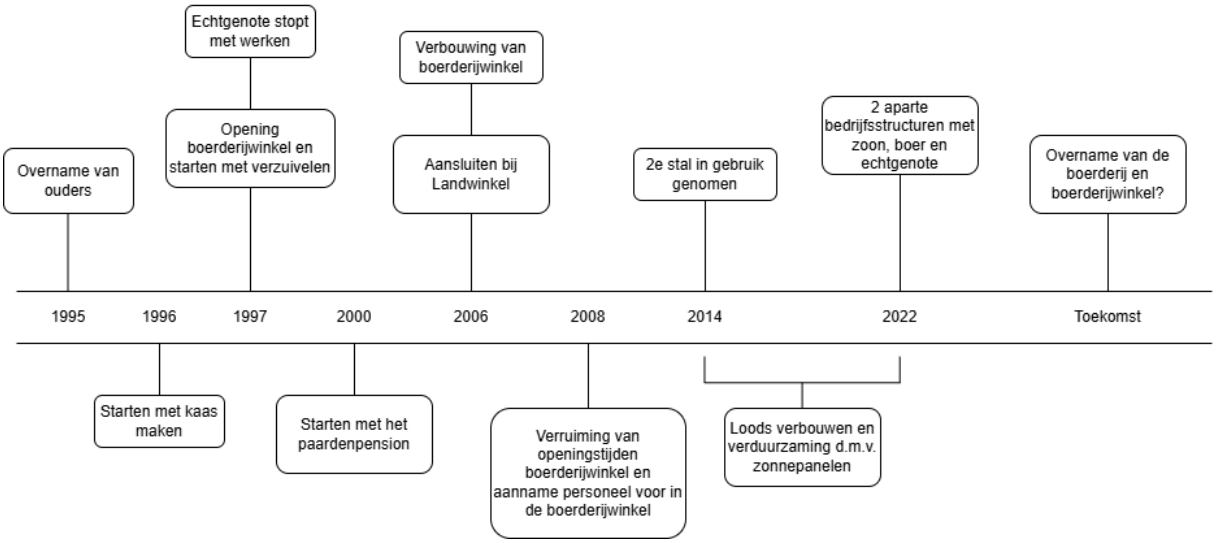

Figure 31: Timeline farm 9

Before the introduction of the SFSC on farm 9, farm 9 was a conventional dairy farm managed by the parents of the farmer. In 1995 farmer 99 and his wife took over farm 9 from his parents. During that period the farmer worked on the farm and his wife worked elsewhere. The farming practices and relations were comparable to those of other conventional dairy farms. These relations are also illustrated in schematic relation overview 32 below.

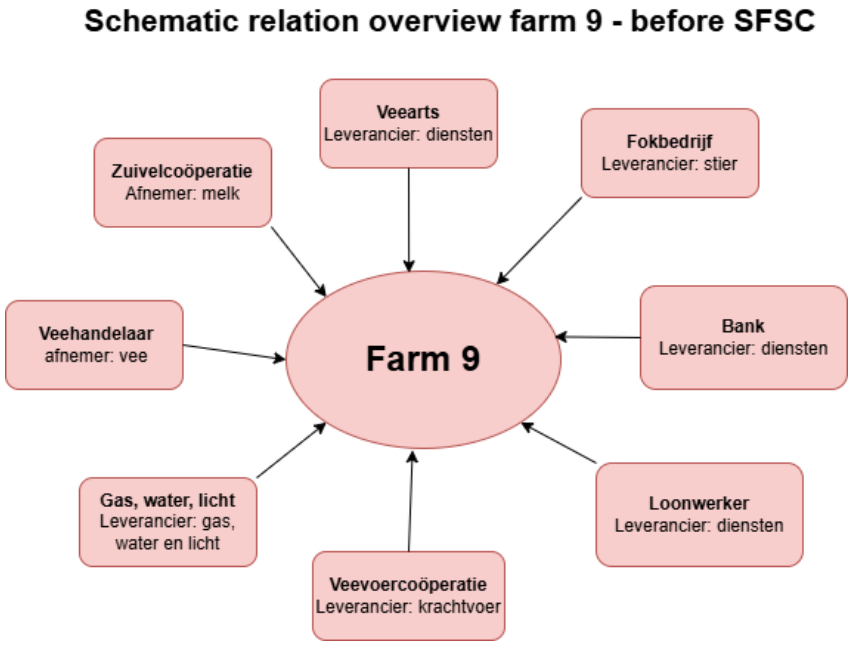

Figure 32: Schematic relation overview farm 9 - before SFSC

In 1996 the farmer and his wife decided to initiate a SFSC on their farm. The plan was to open a farm shop and to produce dairy and cheese products. Therefore, the barn floor was renovated in 1996 into a cheese and dairy factory and in a farm shop. In 1997 they opened their doors for customers. There were also new practices that came with the initiation of the SFSC, like producing cheese and managing the farm shop. Therefore, the farmer's wife did stop with her regular job and started working in the cheese factory and in the farm shop. This also came with new practices, like for instance producing cheese and managing the farm shop. In addition to that, they hired staff for the cheese and dairy factory to help them with those practices. Apart from selling their own cheese and dairy products in their farm shop, they sold eggs and honey from a local farmer and a beekeeper. These relational changes are illustrated in figure 33 below.

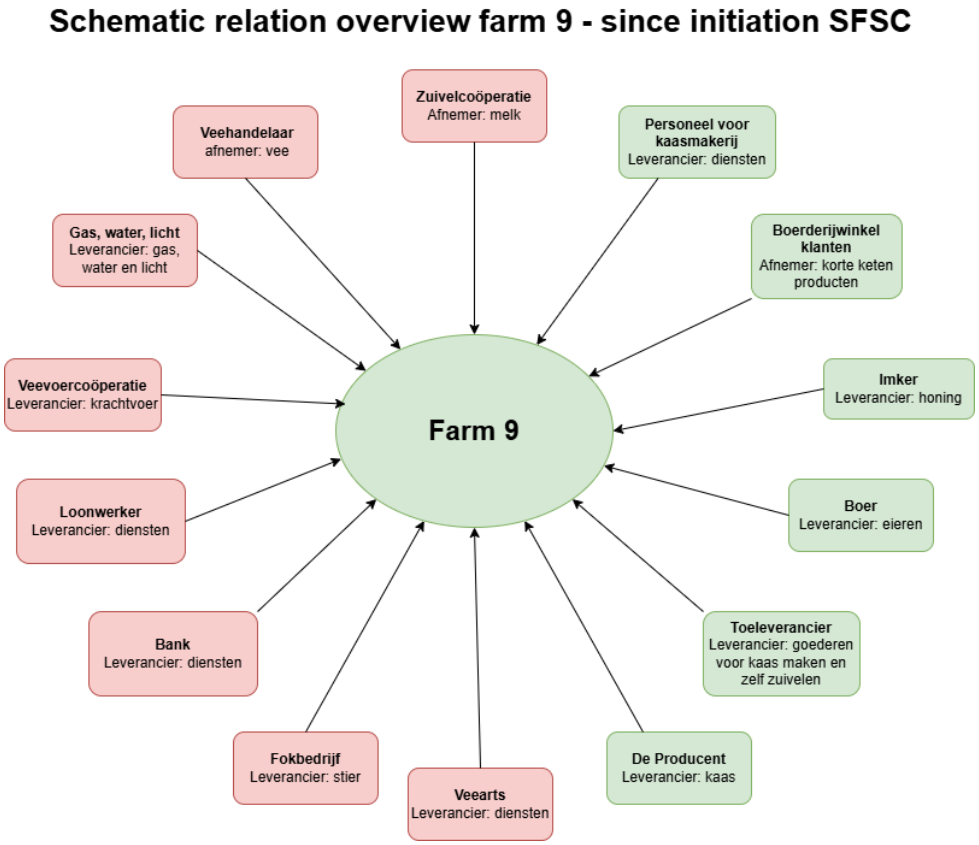

Figure 33: Schematic relation overview farm 9 - since initiation SFSC

In 2006, farmer 9 and his wife decided to become a member of a cooperative, which was founded in that same year. The farmer and his wife were looking for support in their farm shop and wanted to expand their product range. The cooperative was able to help with those needs. By giving advice on how to renovate and decorate the farm shop, but also by suppling SFSC products for in the farm shop. Therefore, the farm shop was renovated and expanded in 2008. And with the help of the cooperative, the farm shop's product range was expanded with long lasting products like jams, juices and nuts. In addition to that, other individual suppliers such as a brewer and a miller also started to supply their products to farm 9. Besides that, the opening hours of the farm shop were extended since its renovation. Therefore, staff was hired to help with the practices in the farm shop. The relational changes since the membership with the cooperative are illustrated in figure 34 below.

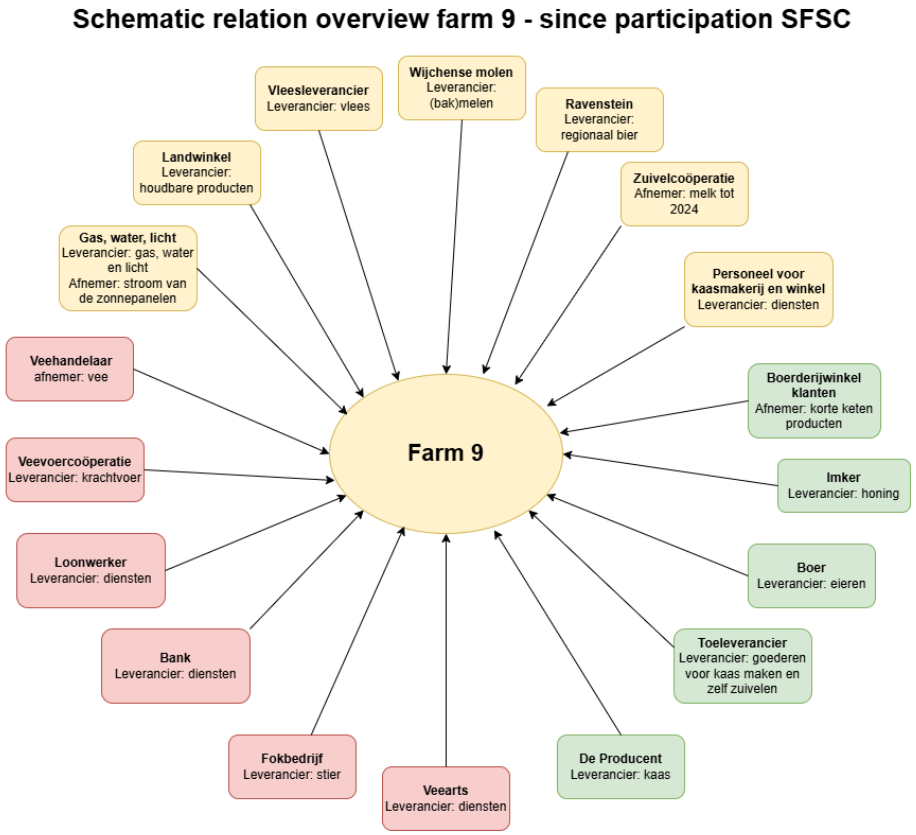

Figure 34: Schematic relation overview farm 9 - since participation SFSC

7. Further analysis: Drivers and goals, evolvement and embeddedness

Now that all the farmers have been properly introduced, an analytical evaluation of the results is hereby presented. The narratives from this analysis are enriched with translated quotes from the interviews. The assigned number of each farm(er), which were used in the previous paragraph, are also used in this paragraph in order to facilitate straightforward and simple reference. While reading the analysis of the results it is important to know that each farm has a unique story and a unique embedding (Van der Velde, 2020). Besides that, the sub-chapters about drivers and goals, evolvement and embeddedness are all linked to each other. For instance, the social cultural relations from the embeddedness has an influence on the personal evolvement of the farmer and vice versa. Thus, while reading, it is sometimes wise to zoom out and take a helicopter view to see the links and connections between the result sub-chapters. This approach facilitates a more comprehensive understanding of the broader context.

7.1: Drivers and goals

When a farmer initiates or participates in a short value chain, there is always a driving force or a set of goals behind it. But before the farmer got to those initial drivers and goals. There are often events or evolvements which triggered the farmer to go in a different direction with the farm development. Like for example, due to the newly entered milk quota rules farmer 6 switches from regular cows to water buffalos. But since there is no dairy cooperative for buffalo milk in the Netherlands, farmer 6 and its family was forced to dispose the milk by an alternative route. Which eventually resulted in a short value chain. Other farmers were sometimes triggered by watching other farms which were already operating in a short value chain. Those example farms triggered the

farmers to see alternative opportunities for their farm evolvement, which eventually influenced their perception of the opportunities for farm development.

''So, we went to look at other farms that did similar things. To get some orientation. And there we saw people who lived very remote. And those people succeeded in running a farm shop over there. Thus, then we thought that we should also be able to do that, because we are living very close to Nijmegen.'' – Farmer 9

Sometimes drivers and goals were initially sparked out of pure interest of the farmer or by his or her family members. With 3 out of 9 farmers, this was the case. For instance, the farmer's wife from farm 3 and the farmer from farm 8 both followed a course in making dairy products (see chapter 6). Besides that, farmer 9 already made cheese as a hobby.

''The click really came when I registered *for that course, in 1996/1997, for a cheese-make-course and I went to those farms.''– Farmer 8*

Sometimes another farm or company with a short value chain discontinued and asked the farmer to take over the business. With farm 2 and farm 5, this was the case. In this way, they got acquainted with the option to start a short value chain on their own.

''And back then he said, he made cheese and dairy. And back then he said that he wanted to quit with making diary. So he asked if we were interested.''- Farmer 5

After the triggers had their effect and the farmers decided to initiate or participate in a short value chain, the drivers, motivation, ambitions and goals became more explicit. Often financial motives were given. To have more financial freedom, to create more margin on their products or to create extra source of income for instance. Besides that, 3 out of 9 farmers also said that they wanted to become an ambassador of the agricultural sector.

''Why I started with a short chain? I noticed that in the trade sector there was a big margin. So, in the first place my objective as a young entrepreneur back then was, yes, but meat is sold at the butcher for 30 euros per kilo and we only get 3 euros per kilo, that doesn't fit. That is ridiculous. Then you start digging deeper and you discover that there are really some problems on the road. Initially, my driver was economic. Absolutely.'' – Farmer 4

Apart from the more general drivers and goals, this study focussed on 3 types of SFSCs. Farmers who are independent, farmers who are collaborating withing a network and farmers who are member of a cooperative. An important note is that every farmer in this study started with an independent short value chain. The schematic relation overviews, also display this. However, over time, some farmers chose to stay independent, some for the network and some for the cooperative. These evolvements were also fed by specific drivers. The 3 out of 9 farmers who stayed independent all indicated that they preferred to go their own way. Therefore, they did not choose for a network or a cooperative.

''Because, we don't have to. We want to. And we don't want to have to.'' – Farmer 2

The 3 out of 9 farmers who were collaborating within a network indicated that they viewed, the specific network selected for this study, only as a customer for their short value chain. All of the 3 farmers indicated that they also highly value a certain level of independence. That been said, the network did not come with obligations, they just want to buy short value chain products. Therefore, the farmers were intrigued and decided to deliver their products to the network. Apart from that, farmer 4 was actually one of the founders of the network (see chapter 6 and the appendix). His

motivation to found this network in general was to collaborate with other farmers to bring their products directly to the consumer.

''We always have found it important to stay independent. We hold that high in regard.'' – Farmer 5

Finally, there were 3 out of 9 farmers, with already self-established short value chains, who chose to become a member of a cooperative. This cooperative was created by merging already existing regional collaborations. Farmer 8 was a member of such an existing regional collaboration and saw the added value of farmers collaborating with each other. This added value due to collaboration is something which al the 3 farmers appreciate about the cooperative, which is one of the main drivers for the farmers to chose for the cooperative. Besides that, 2 out of those 3 farmers pointed out that the cooperative is also a support when it comes down to retail strategic decisions. Lastly, farmer 7 admitted that their initial reason for choosing the cooperative was because of the fact that they did not want anyone else in the area to start with a short value chain that had a collaboration with the cooperative.

''Yes, just the support they can offer at the retail part of course. We are farmers, not retailers.'' – Farmer 9

''Well, initially it was mainly because we didn't want anyone else in the area doing it.'' – Farmer 7

7.2: Evolvement

7.2.1: Farm evolvement

During the interviews a timeline of each farm was drawn, in order to understand the evolvement of the 9 farms. Each farm has its own unique timeline, to see this in detail see the appendix and chapter 6. But overall, some general patterns of the farm evolvement emerged during the analysis, with a particular focus on the initiation or participation in a short value chain. 5 out of 9 farmers mentioned that when they initiated the short value chain, they started really small. For instance, with a small farm shop and a small assortment of products in their short value chain.

''In the beginning it looked very simple. A few freezers at the barn floor. With pre-packaged meat in it. A calculator.'' – Farmer 1

The initiation or participation in a short value chain often went hand in hand with a new partnership or a business takeover. Like for instance, in the cases of farm 2 and farm 5, they took over a farm business from another farmer who already had a short value chain with self made dairy products. As a result, they also took over a few machines and materials from the farmer who was going out of business. However, in most cases, the farmer took over his or her family business. This was often in the form of a co-operative agreement, such as a partnership or a VOF with the farmers' parents.

And like, in the beginning, that's 1995, mid 1995, my husband and I took over the farm business from my parents-in-law. It is a family farm business, that has been in the family for several generations.'' – Farmer 9

This new and fresh start often went hand in hand with the construction or renovation of buildings on the farm. Like for instance, building or renovating the living accommodation of the farmer and his or her relatives. At 7 out of 9 farms, the barn floor was converted into a farm shop. Farmer 8 started a farm shop on a totally different location and farmer 5 built a vending machine with dairy products on the side of the road next to the farm. In addition to the farm shops, new sheds were often built or renovated. The reasoning behind this could vary. For example, for more

cattle, for a new type of cattle, to modernize the farm or to become more sustainable in terms of animal welfare and the environment. At 6 out of 9 farms, they have started to produce their own cheese- and dairy products. Therefore, on each of those farms, a space was created where these products could be made, in other words a dairy or cheese factory. Apart from that, at 3 out of 9 farms a catering branch was created to complement the already existing short value chain. After a while, the farm and its SFSC business were often expanded if the short value chain proved to be a success. With for instance, a new shed or a renovated and larger farm shop. Not only has the farm shop itself changed, but also the products which are sold in it as well. Thus, with more products, new products or in general an expansion in the product assortment.

''Yes, we have made the farm shop about three times as big. Back then we had the counter in the middle, like a square here. And we had the shop all around it. And yes, that actually went quite well, but at some point the farm shop became too small again.'' – Farmer 3

2 out of 9 farmers indicated that due to the visible changes on the farm, the farm got a more open and transparent appearance. Which can be beneficial for the short value chains on the farms, as it is therefore easier for potential customers to enter the farm. All in all, it is evident that many physical changes can occur on a farm, when a farmer decides to initiate or participate in a short value chain. At least, this was the case for these 9 farms in question.

Apart from the fact that there have been many visible changes on the farm, there have also been things which did not visibly change on the farm over time. Like for instance, at farm 2, the farm part of the whole farm business is run by the farmer's brother-in-law. Consequently, the sheds for the accommodation of the cattle stayed the same. Despite the initiation of a short value chain on the farm. Additionally, the shed for the cattle at farm 9, remained the same. Even though the number of cattle fluctuated over time, the shed itself stayed the same.

7.2.2: Personal evolvement

Apart from the farm evolvement, the farmers also went through a personal evolvement over time. To read about each farmer in more detail see chapter 6 and the appendix. Even though every farmer is unique, which makes it difficult to analyse, still some general patterns in personal evolvement emerged during the analysis, with here also a particular focus on the personal evolvement before and after the initiation or participation in a SFSC. During the interviews it became clear that, due to all the experiences and knowledge over the years the farmers have evolved to the persons whom they are today. Thereby, in some cases the personal evolvement of the farmers partner will be discussed. As they sometimes are in the farm business as well. First of all, something which almost every farmer shared was the fact that one of their main character traits was, that they like to go their own way or like to follow their own feeling. This internal influence potentially might have fuelled their way of thinking and acting, and therefore amongst others their personal evolvement.

''I'd like to go my own way.'' – Farmer 3

Before the initiation or participation in a SFSC the farmers of course already had their own way of thinking, their own ideas and attitude towards their own farm and in general towards the agricultural sector in the Netherlands. Farmer 4 and farmer 6 specifically implied that in the beginning period of them as operating farmers, they focussed more on production and efficiency.

''In the beginning, when I just left school, really production, mass, maximum production and maximum gain. That was really my way of thinking back then. From a hectare of land, on every

square millimeter, must be productive. That animal really had to be at maximum production.'' – Farmer 4

The rest of the farmers gave the indication that they always had ideas and ways of thinking, which were quite different compared to most conventional farmers in the Netherlands. Like for instance, the farmer from farm 2 said during the interview that their ideas and way of thinking about nature, sustainability and circularity already existed, long before they initiated their SFSC. Apart from, the already existing way of thinking, ideas and attitudes, sometimes due to certain events, which were so triggering and crucial, the farmer changed these ideas, attitude and way of thinking. I already slightly touched upon certain triggering events in the paragraph about drivers and goals. But now we are going to dig a bit deeper, because triggers can also influence the farmers way of thinking, their ideas and attitudes. Some farmers even said during the interviews, that some events were so radical, it forced them to start think differently. Like for example, with new government legislation and regulations. Farmer 4, for instance, was told that his land would be near or in Natura2000 areas. This forced him to think differently about the way he farms, if he wanted to continue with his farm business.

''Then I started to see nature no longer as a threat, but as a challenge.'' - Farmer 4

Apart from the triggers, sometimes a farmer's attitude, way of thinking and ideas slowly changed over the years. For example, the farmer from farm 5 stated that due to all the changes and things they experienced, that she became more and more mentally strong in a way that she is less likely to take things personally.

''No. No, and that is what I was about to say. Saturday, when we were in car with Geert, we were talking about how you also get a bit of calluses on your soul.'' – Farmer 5

Other than external influences which can shape the personal evolvement of a farmer. During the interviews internal influences like age and health were also frequently mentioned as influences of the personal evolvement. Like how over the years, farmers want to take it slowly now and then, because they are getting at a certain age.

''Well, okay. When I was 25 I was able to do more than I can now. Age, among other things.'' – Farmer 2

However, interestingly enough, sometimes health issues can also be an influence to choose for something else. Like for instance, with the farmers wife of farm 6. Due to health issues, she was not able to do the work she always had done. Therefore, she quit her job and started a farm shop at their farm. Because she wanted something for herself.

''And then I had the surgery. And then I was no longer working in health care.'' – Farmer's wife from farm 6

As can be read there are many influences which can lead to personal development of a farmer or a farmer's partner. These can be external as well as internal influences. However, there are also things which do not change. Like for example the earlier mentioned character traits of a person. This is something which is quite essential for influencing the personal evolvement of a farmer but does not always necessarily change over time. Something which was also earlier mentioned is that some farmers stated that their way of thinking over the years did not change.

''Well yes, basically my way of thinking hasn't changed.'' – Farmer 7

Interestingly enough 8 out of 9 farmers claimed at some point that their way of thinking did not change. But during the same interviews it became clear that there were topics where the farmers' way of thinking did not change and there were other topics where the farmers' way of thinking did change. In other words, it is hard to pinpoint when someone's way of thinking actually changed or remained the same.

7.2.3: Farm practices evolvement

During the time that the farm physically changes, and the farmer goes through a personal evolvement, the farming practices evolve as well and is constantly seeking for a new balance. Here as well, for the specific details per farm see chapter 6 and the appendix. When a farmer decides to initiate or participate in a SFSC, automatically a new set of practices comes with it.

''Of course, the farm has evolved, it has gone in a certain direction and of course that has consequences for the farm practices you do.' – Farmer 4

Something which a lot of farmers start to do is producing products derived from their initial produce. For example, 6 out of 9 farmers decided to start with producing their own dairy products using the milk produced by their cattle (see chapter 6). These are quite particular and very labour-intensive tasks, but above all they were new practices which became part of the daily life of the farm business. Depending on the interest or background of a person, sometimes a certain person within the family specifically has the role to produce the dairy products. Like for instance, at farm 3, where the farmer's wife is in charge of producing the dairy products for the SFSC.

''Yes, in the past we indeed only had the farm. When we started the farm shop, yes my wife is the one who makes the dairy, so to speak. So that is really, sometimes I do interfere. Not with the making process, that is really her thing.'' – Farmer 3

Apart from producing products, as mentioned earlier, 7 out of 9 farms have an operating farm shop. These farm shops automatically came with new practices. Most of them seller or retailer related. As mentioned earlier, these farm shops started often quite small and grew over time into larger and more professional farm shops. With these farm shops evolvements, the farm shop related practices evolved with them. Aside from product selling in the farm shop, a major difference is the direct contact between the farmer and the consumer as a practice itself. As the SFSC grew over time, new ancillary side business branches were frequently initiated. Like a catering branch at farm 3, organizing excursions at farm 6 and 7, a horse boarding business at farm 9 or creating a space for farmer's golf at farm 7. This also came with new and more practices.

''Let's see, what really needs to be on there is farmers golf in my opinion. That also happened around this time. It caused a big growth for us. Because we were literally the first farm who started with it. My father started it.'' – Farmer 7

Something else that is worth mentioning is, apart from initiating a SFSC, the publicity and advertising for the SFSC is a practice which the farmers and his or her partners also picked up. This came along in various forms. Like, word of mouth advertising, organizing an open day at the farm, using social media platforms, appearing on national TV, handing out flyers or standing on fairs. This can be seen as new and more practices that have become part of the everyday farm practices, but often in a different and unique form for each farm.

''Yes, one time we organized an open day. At a sudden moment. And we tried to get something in the newspaper, an article. Yes, and word of mouth advertising of course is the most important one. Yes, so back then it started to grow slowly.'' – Farmer 9

Apart from evolvement in practices related to the SFSC, likewise there is evolvement in practices related to the farm practices. These farm practices refer to the practices that keep the farm itself running. Like for instance, milking the cows and ploughing the land. During the interviews it became clear that when changes in farm practices did occur, they were often related to modernization or sustainability. New modernization-related practices were for instance, the purchase of a milking robot at farm 3, the purchase of automated cheese making machines at farm 7 or the purchase of a hay drying machine at farm 1. It became evident that especially farm 7 has undergone significant evolvements in the field of modernization practices.

''So, it has become more specific and of course everything is more automated. We milk with milk robots, not in the milking parlor anymore. The cheese making process is now largely automated.''- Farmer 7

New sustainability-related practices could be traced back to the treatment of the cattle and the treatment or management of the land. Farm 1 is an organic farm, there it is not allowed to go over a certain amount of anti-biotics for the cattle. But at 3 other farms the amount of anti-biotics used was reduced. At farm 6, they even started to make use of alternative medicine for the calves.

''The stuff from the bees works even better. The propolis and pollen grains and things like that. Go ahead and get that. Honey. It works great.'' - Farmer's wife from farm 6

In addition to that, the changes in treatment of the land which were implemented by several farmers were quite diverse. First of all, here also farm 1 is not allowed to make use of pesticides, herbicides and artificial fertilizer. That been said, 4 out of 9 farmers implemented herb rich grassland. The reasoning for implementing herb rich grassland did vary from soil health, protection against drought, cattle health or producing overall healthier or higher quality milk.

''Yes, we did make the switch. Because before that time we were just conventional. And from the moment we started with the farm shop, we also started with herb rich grassland.'' – Farmer 3

In line with implementing herb rich grassland, those farmers also began to use fewer chemical pesticides or herbicides. In addition to that, the use of artificial fertilizers also reduced. 1 of those 4 farmers even quitted with using artificial fertilizers all together. In terms of other changes in land management practices, farmer 4 stated specifically that he makes use of green manure crops and leaves residuals of cultivated corn plants on the land as organic matter for the soil. This same farmer also stated that instead of using chemical pesticides or herbicides, he prefers using mechanical pest control. On top of that, 2 out of 9 farmers have converted agricultural land into nature areas.

''And here we transformed the agricultural land into nature. So, it's no longer agricultural land where our cows now walk, but it is natural land.'' – Farmer 9

As previously stated, most of the SFSCs grew over time. In some cases, the growth was so existential that the employment of staff was a common occurrence. But often only when it was financially viable. In most cases each staff member is given a specific task. The most mentioned jobs were farm shop staff, cheese/dairy maker or a farmhand. As time passed, since the farm is constantly evolving, the people who fulfilled the different jobs and tasks on the farm sometimes alternated. In addition to that, during the interviews it became apparent that when staff was hired, the practices of the farmer and his or her partner frequently evolved into more managerial types of tasks.

Apart from the fact that there have been changes in farm practices over time. Some farm practices have not changed over time. First of all, 3 out of 9 farmers decided not to hire staff. With

the exception of hiring an agricultural contractor every now and then. Secondly, the farm practices which did not change over time were practices related to the farm practices. Thus, the practices which keep the farm itself running. For instance, every farmer still makes use of concentrated feed for their cattle. Apart from the previously mentioned farmers about the no or reduced use of anti-biotics, the rest of the farmers still make use of anti-biotics for their cattle. The same goes for artificial fertilizer and chemical pesticides.

7.3: Embeddedness

7.3.1: Social cultural relations

The socio-cultural relations include the values, norms, and culture of farming a farmer identifies himself or herself with (Methorst et al., 2017).

7.3.1.1: Values and norms before initiating or participating in a SFSC

Before the embeddedness of each farm was disrupted amongst others due to the initiating or participating in a SFSC, the farmer of course already had norms and values about him or herself and the farm. In order to find out what the farmers' former norms and values were, the farmers were literally asked what they considered as important for themselves and for their farm, before they started with the SFSCs. During the analysis, the following norms and values came up.

As mentioned earlier in the paragraph about personal development of the farmers. A character trait which most of the farmers shared was that they like to go their own way. Therefore, it is not surprising that 6 out of 9 farmers already highly valued independence at that time. It is notable that the independent and the network farmers were the ones who explicitly stated this, as compared to the cooperative farmers.

''No, we have always followed our own way.'' – Farmer 6

Thereby, farmers 1,3,5, and 6 indicated that transparency and honesty was already highly valued before the initiation or participation in a SFSC. For instance, being transparent with how they treat their cattle or being transparent on how things work in the agricultural sector in general towards society.

For farmers 1 and 2, sustainability was already highly valued long before the initiation or participation in a SFSC. Farm 1, is an organic farm, therefore it is not surprising that this farmer already highly valued sustainability. Farmer 2 stated that she and her partner had always valued sustainability and that it was already in their way of thinking as well.

As opposed to sustainability, farmers 4 and 6 explicitly stated that, when they were young farmers, that they valued an efficient and profitable farm production. This can also be read in the paragraph about personal development as their norms and values are also reflected in their way of thinking.

7.3.1.2: Current values and norms

In order to find out what the farmers' current values and norms are, the farmers were asked what they considered as important for themselves and for their farm. Different answers were given to this question, as every farmer with their farm is unique. In other words, every farmer with their farm is differently embedded and therefore has different values and norms. First of all, farmers 1,2,3,4,5, and 6 indicated that they highly value independence. They find it important to be able to go their own way and at the same time to follow their own feelings.

Apart from being independent, 9 out of 9 farmers indicated that they highly value transparency and honesty. By this the farmers mean transparency and honesty towards the outside world and in particular the consumers. All the farmers find it important to show the consumers how their products are made and how things are going on a farm. By being transparent and honest the farmers try to gain trust from the consumers. But it also can be a way to be an ambassador for the agricultural sector.

''Just an honest story, an honest product, an honest story.'' – Farmer 6

''And you can also show the consumer what you do. What you do yourself, but also as a sector. And we notice that it is highly appreciated and very important.'' – Farmer 3

Thereby, during the analysis of the interview transcripts it became clear that farmers 1,2,3,4,5,6, and 8 find it important to produce high quality products with their SFSCs. Ensuring high quality products also stimulates the uniqueness of not only the products, but also the farmer and the farm.

''We believe it is important to produce high-quality products.''- Farmer 2

''That you strive for a certain, in this case also organic, quality level. And you also try to keep the quality at a high standard.'' – Farmer 1

In the result paragraph about farm practices, some farmers indicated that they started with more sustainable farm practices. Therefore, it is not surprising that for the farmers 1,2,3,4,6,8, and 9 expressed that for them sustainability became a more important issue.

Lastly, 9 out of 9 farmers expressed that they find the social factor important for themselves, their farms, and SFSC's. The social factor refers to the contact that farmers have with their surroundings. Like for example, having direct contact with the consumer, with other farmers or in general contact with society.

''I think the side effect is mainly the social contacts, you build up.'' – Farmer 1

''But we have noticed that working with people is just as fun. And being a dairy farmer is really boring, right?'' – Farmer 5

7.3.1.3: What changed and what did not change in the farmers' norms and values

Apart from what the farmers their norms and values used to be and what their current norms and values are. It is interesting to see which norms and values changed over the years due to the changes in the embeddedness. What is striking is that roughly most farmers indicated that their values and norms did not really change over the years. Most of those values and norms have actually been reinforced over the years.

''Nothing less, it actually only gets stronger.'' – Farmer 4

However, there are also values and norms that are new, or where the focus has shifted more towards. It is for example quite evident that most farmers shifted their focus more towards producing highly quality products. Thereby, most farmers also started to appreciate the social factor more. And lastly, as mentioned before, sustainability has become a more important issue for most farmers. These new values have been put into practice in various ways. For example, see the paragraphs about farm evolvement, farm practices and the appendix.

''Yes, yes, yes, that also plays out on different levels of course. I think, for example, the assessment of what I do with the cows. How I take care of them, in what kind of pattern they are. That I have become even more fierce and stricter about sustainability. It is completely clear that is also because we have a farm shop here. And we also want to be forefront with this.'' – Farmer 8

7.3.1.4: Farm identity

Besides the values and norms that are subject to the social cultural relational embedding of farmers, their farming practices and farms. The culture or farm identity can also change over time. With farm identity is meant, the way of farming a farmer identifies with. Hereby, it was difficult to discover any general patterns, as every farm is unique, and every farmer identifies him or herself differently. However, every farm and its identity will be briefly discussed. To see every farm in more detail, see the appendix and chapter 6. First of all, farm 1 was an organic dairy farm before they initiated the SFSC, over time they went from a biodynamic dairy farm to a multifunctional organic beef farm. Secondly, farm 2 started as a separate conventional dairy farm and an open field vegetable farm. Over time they evolved into a closely cooperating conventional circular 'cheese and dairy making' farm. Farm 3 started as a conventional dairy farm and transformed into a conventional nature inclusive and 'dairy making' farm. Farm 4 started as a conventional beef farm, but is now an extensive beef farm with a conventional and an organic branch. Farm 5 was originally a conventional dairy farm, but nowadays they identify more as a conventional dairy making farm. Farm 6 started as a conventional dairy farm with regular cows but switched towards a conventional buffalo dairy farm. Farm 7 began as a mixed conventional farm but is nowadays a conventional multifunctional modern 'diary and cheese making' farm. The same goes for farm 8. They started as a conventional mixed farm and transformed into a conventional multifunctional 'dairy and cheese making' farm. Lastly, farm 9 started as a conventional dairy farm, but is nowadays a multifunctional conventional 'dairy and cheese making' farm. It is evident that every farmer believes that their farming identity did change over time.

7.3.1.5: Similarities and differences in social cultural relations between different types of SFSCs

Regarding the similarities in the embeddedness of the social cultural relations between farmers, their farming practices and farms, when initiating or participating in different types of SFSCs, there are some results. First of all, as read before, every farm went through some form of an identity change. Secondly, as mentioned before, almost every type of farm seems to highly value the social factor, producing high quality products and sustainability has become a more important issue. On the other hand, regarding the differences in the embeddedness of the social cultural relations between farmers, their farming practices and farms, when initiating or participating in different types of SFSCs, there is also a result. It seems that the network and independent farmers value independence more compared to the farm who participate within a cooperative. This idea is suggested by the fact that the cooperative farms did not explicitly mention that they highly value independence during the interviews, compared to the network and independent farmers who did.

7.3.2: Value chain relations

The value chain relations focus on which value chain a farm is linked to or a part of, and which networks or spheres of influences affect a farm its development (Methorst et al., 2017). During the interviews, the farmers were asked to draw collaboratively with the interviewer two and sometimes three schematic relation overviews. The first overview represents the relations before the initiations of the SFSCs. The second overview represents the relations after the initiation or the SFSCs. Lastly, the third overview represents the relations after participation with a cooperative or a network. All the schematic relation overviews can be found in the appendix and in chapter 6. Consequently, the details of each farm will not be elaborated upon in this sub-paragraph, but rather the overarching patterns will be described.

7.3.2.1: value chain relations before initiating or participating in a SFSC

Before the farmers initiated a SFSC, the farmers and their farms were already linked to certain relations and connections. The most mentioned relations and connections were the following: A dairy cooperative, a KI or a sperm supplier, an animal feed cooperative, a gas, water and electricity supplier(s), a cattle trader, a veterinarian, an agricultural contractor, a bank and certain inspection companies. These aforementioned relations can be considered comparable to other farms that did not initiate or participate in a SFSC. And are essential for farms to operate. These relations are also reflected in chapter 6 and in the profiles of the farmers.

7.3.2.2: Value chain relations after initiating a SFSC

After the SFSCs were initiated on the 9 farms, the above mentioned relations remained intact most of the time. This is also reflected in the schematic relation overviews in chapter 6 and in the profiles of the farms. However, the embedding of the farms and their value chain relations changed due to the initiation of the SFSCs. Depending on the ways in which the SFSCs were implemented, various relations were added to the value chain relations of each farm. Namely, in the case of this dataset, 6 out of 9 farms did start with making their own cheese and dairy products. Therefore, these 6 farms connected with suppliers for the resources for dairy and cheesemaking, like for instance rennet and packaging materials. These farms also became acquainted with the COKZ, which is an inspection authority that monitors the dairy processing. Apart from the cheese and dairy making farms, all farms create products which are for sale. Therefore, all the farms got acquainted with several buyers, like farm shop customers, wholesale companies, a catering branch, a supermarket, other farms with a SFSC etc. In contrast to the buyers, all the farms got also acquainted with various suppliers. The suppliers were mainly those who were able to supply products that were a good complement to the range of products offered by the farm in question. Interestingly enough, it was often seen that there is an exchange of products between farms which have a SFSC. Apart from the buyers and suppliers, the involvement of intermediaries was a common occurrence. Like a butcher or an ice cream maker. Finally, depending on the farm, sometimes there are also volunteers or hired staff who help with the farm practices and the practices specifically targeted at the production of SFSC products.

7.3.2.3: Value chain relations after participating in a SFSC

After the SFSCs had been running quite well for some time, a number of farmers entered a new phase, which lead to a re-embedding of the farm, the farmer, and the farming practices. 3 farmers decided to participate within a network and another 3 farmers decided to participate within a cooperative.

First, the participation within a network will be discussed. For farm 5 and farm 6, the network is simply another customer. But farmer 4 one of the co-founders of this network. Therefore, this farmer is more connected to this network, compared to the other 2 farmers. Furthermore, as stated before, the network did not come with obligations. The network simply wants to buy the SFSC products farmers 4,5, and 6 offer. Therefore, it can be argued that the participation in a network does not play a huge role in affecting the development of farms 4,5, and 6.

Apart from the network, this study also did focus on 3 farmers, who after some time decided to participate within a cooperative. First of all, all those 3 farmers indicated that the cooperative is simply a supplier of SFSC products for them. However, it turned out that for farm 7, the cooperative is actually also a buyer of their cheese. This means that the cooperative not only supplies products, but also acts as a customer. Farmer 7 indicated that, partly because the cooperative is also a customer, the farm has grown considerably as a result (see chapter 6 and the appendix). In addition, farmer 7 indicated that his father was the chairman of the cooperative for a long period of time. This

may be interpreted as an indication of the extent to which farm 7 is committed to the cooperative. Furthermore, it appears that all the 3 farmers have been members of the cooperative, since its formation. Farmer 8 and his wife were even co-founders of the cooperative, as can be read in the quote below. Furthermore, in the schematic relation overviews, it can be seen that other relations are often added or changed around the same time as the farmers join the cooperative. However, there does not always seem to be a direct link between these relations. Sometimes they seem more like separate changes, and they are not necessarily directly caused by the membership of the cooperative. Like for instance, farm 9 connected with a mill that supplies baking mixes for their farm shop. This happened around the same time, when farm 9 joined the cooperative. But there does not seem to appear a direct link between these two relations, apart from the fact that farmer 9 wanted to expand the product range in their farm shop.

''It originated from somewhere, we never actually participated in the cooperative, we actually founded it ourselves. That's the story. Together with others of course and actually nowadays I don't know the exact ins and outs from the cooperative. But in the beginning, we were very close on it, because we saw the added value in that collaboration.' – Farmer 8

7.3.2.4: What changed and what did not change in the value chain relations

After all the evolvements in embedding that the farms have gone through, it is noticeable to see that in general, for most farms, the relations directly linked to the farms have not really changed over time, they often continued. However, the relations directly linked to the SFSCs of the farms were new or changed over time. This is overall, the general pattern of changing and continuing the value chain relations of the farms.

7.3.2.5: Similarities and differences in value chain relations between different types of SFSCs

Moreover, one of the similarities in the embeddedness of the value chain relation between farms which initiate or participate in different types of SFSCs is therefore also the fact that the relations directly linked to the farms not really changed over time. In addition, there is a relation which occurs in all three types of SFSCs. That relation is Postuma, which is a wholesale company. This particular wholesale company works as a distribution company and supplier for the cooperative. In other words, farm 7,8, and 9 place orders with SFSC products for in their farm shop and Postuma delivers those products to them. Thereby, Postuma is also a supplier at farm 3, which is an independent farm. Opposite to that, Postuma is a buyer from farm 5, who participates in the network. Another noticeable similarity between the farms with different types of SFSCs is that all the farmers seem to have contact with other farmers who also have SFSCs. This occurs in several forms like for instance, by means of an association, a network, a cooperative, a supplier-buyer relation, a collaboration etc. However, it is important to note that there are also differences that require further understanding. First of all, the farmers who are participating within the cooperative often order their supplementary SFSC products through Postuma. While the independent and the network farmers often order their supplementary SFSC products through individual farmers who also have a SFSC. Furthermore, it became evident that, the independent and network farmers often have contact with individual promotion companies, or the farmers take care of the promotion for their SFSCs themselves. The opposite is the case for the farmers who are members of the cooperative. They get help from the cooperative to promote their SFSCs.

7.3.3: Resource relations

The resource relations stand for the origin of resources for farm production (Methorts et al., 2017). The resource relations of farms can change or fluctuate over time as a result of evolvements which disrupt the embeddedness of these relations.

7.3.3.1: Resource relations before initiating or participating in a SFSC

Prior to the initiation or participation of the SFSCs by the farmers, the farms were already embedded in resource relations. The most mentioned resource relations were roughage, concentrated feed, artificial fertilizer, anti-biotics, wet-by-products as feed, water, gas, and electricity. These are resources that would be used by the average conventional dairy farmer as well. These relations are also reflected in the schematic relation overviews of the farmers in chapter 6 and in the appendix.

7.3.3.2: Resource relations after initiating a SFSC

The embedding of the resource relations was disrupted after the SFSCs were initiated on the 9 farms. As mentioned before, in this case, 6 out of 9 farms started with making their own cheese and dairy products. As a result, new resource relations have emerged linked to these particular farms in favor of the cheese and dairy production process. For instance, suppliers of cheese and dairy machinery, packaging materials, starter cultures, rennet, and mixes for fruit yoghurts. Apart from the cheese and dairy producing farms, most farmers initiated a farm shop. And for those farms new resource relations occurred in the form of products that were a good complement to the range of products offered by the farm in question. It differs per farm where these additional SFSC products originate from. Besides the newly established resource relations directly linked to the production of SFSC products, changes in resource relations have also occurred at farm level. As with the above mentioned, roughage, concentrated feed, artificial fertilizer etc. For example, some farmers have installed solar panels on their farms. As a result, these farms are less dependent on the average energy supplier. However, these changes in resource relations at farm level did not occur frequently.

7.3.3.3: Resource relations after participating in a SFSC

When farmers 4,5, and 6 decided to participate within a network, the embeddedness of the resource relations did not change for the farm production. Because the network is only a buyer and not a supplier. But when farmers 7,8, and 9 decided to participate within a cooperative the embeddedness of the resource relations did change. Considering the fact that the cooperative became a supplier of complementary SFSC products for the farm shops. But other than that, nothing else seemed to change within the embeddedness of the resource relations.

7.3.3.4: What changed and what did not change in the resource relations

All in all, most of the time the resource relations did not change at farm level. However, when the SFSCs were initiated, new resource relations occurred in the form of new resources for the SFSC products production and suppliers of supplementary SFSC products.

7.3.3.5: Similarities and differences in resource relations between different types of SFSCs

Therefore, it can be argued that the main similarity between the embeddedness of the resource relations, between farms which initiate or participate in different types of SFSCs, is the phenomenon that the resource relations at farm level did not really change over time for almost all of the farms. On the other hand, the most noticeable difference in the embeddedness of the resource relations between farms which initiate or participate in different types of SFSCs, is the fact that by becoming a member of the cooperative the embedding of the resource relations did change, due to the membership alone. This was not the case for the farmers who participated in a network or stayed independent.

7.3.4: Other influences which have an effect on the embeddedness

During the analysis of the data, it became clear that there were other influences which have an effect on the embeddedness of farmers, their farming practices and farms. First, the farm itself is anchored or located in a unique embedding. Some farmers indicated during the interviews that

partly because of the location of the farm, the farmers decided to go for a different direction in their farm development. Therefore, it is evident that the location of the farm itself also influences the room for manoeuvre for farm development. For example, farm 7 is located in close proximity to an open-air museum. This makes it a location that attracts tourists.

''well, that has mainly to do with the fact that the location, where you are located, was already very important.'' – Farmer 7

Furthermore, the embeddedness of farmers, their farming practices and farms, changed over time due to anthropogenic influences. During the interviews some farmers pointed out that certain developments in society were of influence of the farm development. The corona period is such an example. As a result, farms shops had to be altered to the regulations which were in force during that time. Like for instance, farm 2 set up a tent to create extra space for their farm shop during the corona period (see quote below). Other societal developments mentioned were the growing market demand for sustainable products, organic products, and meat with an increased fat content.

''But anyway, then you had to, it was only a small farm shop, so at the time you had to keep the one-and-a-half-meter distance. That wasn't actually an option in our shop, because the shop was so small and yet it was quite busy. Thus, we bought, how do you call it, a pergola tent.'' – Farmer 2

Apart from the anthropogenic influences, the embeddedness of farmers, their farming practices and farmers also evolved due to environmental influences. Natural phenomena like drought, mouse plagues, and animal diseases were of influence for the farm development. Farm 6 for example, their meadows did suffer from a mouse plaque. Partly because of this, the farmer decided to switch to herb rich grassland.

'''With herb rich grassland the idea is that there are various plants, which also have roots where the mouse says, of that's gross, I'll walk around that.'' – Farmer 6

8. Discussion

The study aimed to investigate how farmers, their farming practices and farms are impacted by the initiation or participation in a SFSC. In this paragraph the interpretation of the results, comparisons with existing literature, an evaluation of the used methods and theory, and a description of the limitations of the research will be discussed.

8.1 Interpretation results and comparisons with existing research

The objective of sub-question one was to understand the main drivers and goals of farmers for initiating or participating in a SFSC. The used method for this was asking open-ended questions during the interviews about this particular theme. The results show that farmer's initial drivers and goals to initiate a SFSC are often economic drivers and goals. For instance, to create an extra source of income or to have more financial freedom. However, this is not a new insight (Aouinait et al., 2022; Renting et al., 2003; Chiaverina et al., 2023b). Thereby, from the results it can also be interpreted that before the farmer got the initial drivers and goals for initiating a SFSC, there are evolvements or events which triggered the farmer to decide to go for a different direction in farm development. Like for instance, how farmer 6 switched from cows to water buffalos, due to the new entered fat quota rules. In the thesis from Bakker (2021), these trigger evolvements or events are also described. But in the context of Dutch farmers who evolve towards agroecology. Therefore, it can be argued that certain events or triggers are crucial turning points for farmers to initiate the transition of a different direction in farm development. Furthermore, the motivation for the selected farmers to participate within a network was simply because the selected network is able to buy the farmer's SFSC products. But without any obligations. This made the threshold for participating in the

network very low for the selected farmers. Finally, the motivation of the selected farmers to participate within a cooperative was because of various reasons. First of all, because these farmers saw the added value of farmers collaborating with each other. This added value of collaborating with each other is also mentioned in Chiaverina et al. (2023b), as networking opportunities, to be a motivation for a farmer to participate within a SFSC. Secondly, because the cooperative offers support in the domain of retail. Thirdly, farmer 7 stated that they did not want anyone else in their area to start with a collaboration with the selected cooperative.

The objective of sub-question two was to observe and understand the evolvement of farmers, their farming practices and farms, from the moment they initiated or participated in a SFSC until now. The used methods for this objective were also here asking open-ended questions about this particular theme in combination with the timeline method from Zaalmink et al. (2007). The sub-question is divided into the evolvement of farmers, the evolvement of farms, and the evolvement of farming practices. From the results of the evolvement of farmers, it can be interpreted that, every farmer is a unique person, living and working in a unique embedding. However, it is evident that the farmers do evolve over the years. These evolvements of the farmer were due to external or internal influences. The internal influences are factors like age and health. Like for instance, how over the years, farmers want to take it slowly every now and then, due to their increasing age. This was for example mentioned by farmer 2. The external influences are phenomena like triggers and experiences. To illustrate this point, consider the shift in perspective exhibited by farmer 4, how he started to think differently about nature, since he heard that his pastureland would be near or in Natura2000 areas. These influences led the farmers to change their way of thinking, ideas and attitudes. However, it became evident that at some topics the farmers way of thinking, ideas and attitudes did not change over the years. Like for example, how almost all farmers indicated that they like to go their own way or like to follow their own feeling. This character trait did not seem to evolve over the years. This common character trait is reflected in the fact that the farmers are their own boss and dare to set up their own business. Apart from the farmers, it became evident that the farmer's partners are often also a part of the SFSC business. Therefore, it was also important to investigate how these partners evolved as persons over the years as well. From the results of the evolvement of farms, it became evident that, there were numerous visible changes on the farms over the years. First of all, when the farmers decided to initiate a SFSC, parts of the farms were changed in order make the facilitation of the SFSC possible. Like converting the barn floor into a farm shop or creating a space where cheese and dairy products can be produced. In addition to that, new sheds or cattle or machinery were often built or renovated. Furthermore, it is noteworthy that the majority of the farmers started with the SFSC on a small scale. If the SFSC proved to be successful, the enterprise was expanded over time. From the results of the evolvements of the farming practices it became evident that, the farming practices evolved over time at different levels of the farm businesses. First of all, it is important to note that the initiation of SFSCs was accompanied by the introduction of SFSC related practices. Hence, if the farmer decided to start producing products derived from their initial produce, these new set of practices integrated in the daily practices of the farm business. A similar process occurs with new adapted retailer related practices, by farmers who opened a farm shop. This phenomenon of learning new skills or practices when initiating or participating in a SFSC is also described in Chiaverina et al. (2023b). Apart from the SFSC related practices, the farm related practices evolved as well. These new farm related practices were often leaning towards modernised or sustainable practices as the time went by. This is also supported by Chiaverina et al. (2023b). Chiaverina et al. (2023b) found that farmers who initiated or participated in a SFSC were more likely to use environmentally friendly methods. As mentioned before, when the SFSC appeared to be a success, the SFSC got expanded over time. Consequently, the SFSC and farm related practices evolved with it. Like for instance, more practices, or hiring staff to do the extra labour or installing machinery to do certain practices. In addition to the aforementioned, the division of the SFSC and farm related practices were often redivided and reorganised as well.

The objective of sub-question three was to observe and analyse how the change of initiating or participating in a SFSC affect the embeddedness of farmers, their farming practices and farms. The used methods for this particular sub-question were the schematic relation overviews and asking open-ended questions about this particular theme. The embeddedness was divided according to the theory of Methorst et al. (2017) into social cultural relations, value chain relations and resource relations. From the results from the social cultural relations, it can be interpreted that the values and norms of the farmers partly changed, due to the initiation and participation in a SFSC. Because values and norms like independence, honesty and transparency were already highly values before the SFSC. And on the other hand, new values and norms came to the fore, since the initiation and participation in a SFSC, like producing high quality products, appreciating the social factor and sustainability. Furthermore, it became evident that due to the initiation or participation in a SFSC that the farms underwent some form of identity change. The new identity of the farms was often more oriented towards a form of multifunctional or more sustainable farming. The results of the value chain relations analysis suggest that the relations directly linked to the farms have remained relatively stable over time. Conversely, the relations directly linked to the SFSCs of the farm were either new value chain relations or changed over time. First of all, when the farmers initiated a SFSC, depending on the ways the SFSCs were implemented, new relations connected with the farms. Like for instance, the suppliers and buyers of the farm shops. Or the suppliers for the resources for dairy and cheesemaking, which happens at 6 out of the 9 selected farms. Apart from suppliers and buyers, intermediaries as relations, was a common occurrence. Like a butcher for example. Later, farmers 4,5, and 6 decided to participate within in a network. This development consequently resulted in a new relation, namely that of the network as the buyer of SFSC products from farms 4,5, and 6. Apart from the network farmers, farmer 7, 8, and 9 decided to participate within a cooperative. For all the three farms the cooperative became a supplier of SFSC products. However, farm 7 also supplies their cheese to the cooperative. It thus can be concluded that the cooperative is a supplier and buyer at the same time for farm 7. From results of the resource relations analysis, it can be interpreted that the resource relations remained largely unchanged at farm level. However, the initiation or participation of SFSCs gave rise to new resource relations. Which occurred in the form of new resources for the SFSC products production and suppliers of supplementary SFSC products. These new resource relations are related to the new value chain relations which connected with the farms after they initiated a SFSC. Like for instance, suppliers of packaging materials or resources for dairy and cheesemaking or SFSC products for in the farm shop. When farmers 4,5, and 6 decided to participate within a network, their resource relations did not change, as the network is only a buyer and not a supplier. However, when farmers 7,8, and 9 decided to participate within a cooperative, the embeddedness of the resource relations did change. Because the cooperative became a supplier of SFSC products for the farm shops. Apart from the changes in embeddedness which fell into the scope of the social cultural relations, the value chain relations and the resource relations. There were other influences which have an effect on the embeddedness. First of all, the locations of the farms seemed to have an effect on how the farmers perceived their room for manoeuvre to make certain decisions in farm development. Furthermore, the embeddedness of farmers, their farms and farming practices also changed over time due to anthropogenic and environmental influences. Like for instance, the reactions from people or seasons of drought. These anthropogenic and environmental influences seem to fit into the socio-material framework of Roep (2000). Within this framework, Roep (2000) implies that natural and social ordering processes interact with each other and form together a complex entity which have an effect on a complex whole and on farming practices. These natural and social ordering processes seem to overlap with the anthropogenic and environmental influences. Therefore, it can be argued that these results complement the theory of Roep (2000). All in all, the analysis of the embeddedness suggests that, due to the initiation or participation in a SFSC, the embeddedness of farmers, their farming practices and farms does change over time in iterative processes. However, the re-embedding process was predominantly concentrated within the SFSC segment of the whole enterprise, as opposed to the primary farm segment of the whole enterprise.

The objective of sub-question four was to understand and analyse the differences and similarities in embeddedness of farmers, their farming practices, and farms when initiating or participating in different types of SFSCs. The used method for this was to make comparisons of the collected data. For this sub-question, the division of the embeddedness according to Methorst et al. (2017) was maintained. The results of the social cultural relations give the impression that the main similarities amongst the different types of SFSCs were the fact that every farm went through some form of identity change, and every farm seems to highly value producing high quality products, the social factor and sustainability. However, the main difference amongst the social cultural relations between different types of SFSCs was the impression that the independent and network farmers seem to value independence more compared to the cooperative farms. Whereas the cooperative farms seem to value collaboration more. This impression was suggested because the cooperative farmers did not explicitly mention that they highly value independence, compared to the network and independent farmers who did mention it. At first glance, this sounds logic. As the cooperative farmer highly value collaboration with the cooperative and other farmers. However, it became evident that, independent and network farmers also often collaborate with other farmers, but in other shapes and forms. Like for instance, farmer 2 is a member of the association Slow food. However, it should be noted that these other forms of collaborations often come with less obligations. Therefore, it can be suggested that the fewer obligations a collaboration has, the more independent a farmer can be. And if a farmer highly values independence, it really depends on the way a collaboration is designed whether the farmer is likely to participate in the collaboration. Furthermore, the interpretation of the value chain relations shows an interesting similarity between the different types of SFSCs. That similarity is Postuma, which is a wholesale company, which is a supplier for the cooperative farmers 7,8, and 9, a supplier for farm 3, but a buyer from farm 5. Postuma is embedded in all the types of SFSCs, but the specific role or place it has in the embeddedness of the farms however varies. The main differences in value chain relations between the different types of SFSCs is the following. The cooperative farms often buy most of their supplementary SFSC products through the Postuma, whereas the independent and the network farms seem to order most of their supplementary SFSC products through individual farmers. In addition to that, the cooperative farms receive help and advice from the cooperative about the promotion of their SFSC. As opposed to, the independent and the network farmers, who deal with the promotion of their SFSC themselves, or hire a promotion company. Moreover, the results of the resource relations give the impression, that the main similarity in resource relations between different types of SFSCs was the fact that the resource relations at farm level did not change a lot over time, whereas the resource relations which are directly linked to the SFSCs did. However, a noticeable difference in resource relations between different types of SFSCs was that due to the membership of the cooperative, the embedding of the resource relations of those farms automatically changed. However, this was not the case for the network farms, as the network was only a buyer and not a supplier.

All in all, this thesis is contextually different from already existing literature, as the combination of the three-fold embedding theory from Methorst et al., (2017) and the scope of the thesis makes it contextually different. Therefore, it can be argued that the findings are an addition to the already existing research on SFSCs. For instance, the research from Roep and Wiskerke (2010) dived deeper into the process of constructing sustainable food supply chains. Due to the fact that the farms with SFSCs in this thesis exist for 5 years or longer, it might be an indication that these farmers along with their collaborations, constructed a sustainable food supply chain. This longevity is an indication of the balancing act and iterative nature of the embeddedness of the selected farms. Therefore, the findings of this thesis might be an enrichment for the research from Roep and Wiskerke (2010), as Roep and Wiskerke (2010) themselves also indicate that a sustainable food supply chain always is finding and searching for a balance between governance, embedding and marketing in order to ensure its continued existence in the future. Furthermore, Wubben et al. (2013) investigated the differences in the business models of SFSCs, which can be assigned to the initiator stakeholders. Despite this thesis having a farm-level focus, the findings of this thesis still might be an enrichment

for the study of Wubben et al. (2013). Because the thesis looked at different types of SFSCs, which also have different initiator stakeholders. Thereby categorises Wubben et al. (2013) the SFSCs in three types of business models. Namely, in market-driven SFSCs, producer-support SFSCs and producer-consumer interaction SFSCs. Interestingly enough, depending in what phase of evolvement the selected farms in this thesis were, different kinds of business models from Wubben et al. (2013) would be a suitable match. For instance, when the farmers initiated the SFSC, their motivation was often of an economic nature, therefore fitting in the market-driven SFSCs. However, when some selected farmers decided to participate within a cooperative, these farmers received support from the cooperative for their SFSC business. This supportive side from the cooperative is an indication that it could fit into a producer-support SFSC. The overall point is that this thesis gives the impression that the business models of SFSCs are not set in stone and are sensitive for changes and can fluctuate over time, just like the embeddedness of the selected farms. Lastly, Renting et al. (2003) investigated the development and incidence of alternative food networks within Europe. Despite the fact that the scope of this study is broader than the scope of this thesis, the two do in fact have some degree of interface. Because, Renting et al. (2003) created conceptualisations about the variety of quality definitions and conventions which are used within SFSCs. These are, face-to-face SFSCs, proximate SFSCs and, Extended SFSCs. The findings in this thesis fall under the concepts of face-to-face SFSCs and proximate SFSCs. Therefore, it can be argued that the findings of this thesis might be an addition for the study of Renting et al. (2003).

8.2. Evaluation of the used methods, theory, and its limitations

The semi-structured interview guideline was a useful tool to have guidance over the topics which needed to be covered during the interviews, but it still gave enough room of manoeuvre to give the farmer the opportunity to share their unique stories. Furthermore, the timeline method of Zaalmink et al. (2007) was a clear tool for the farmers during the interviews and the final timelines do reflect the most important evolvements of the farms, farmers and farming practices. The timeline method was also used in the master thesis of van der Velde (2020) and the master thesis of Bakker (2021). They both used the timeline method to visualize and describe the main events for farmers who underwent a transition. It can be argued that this is an interface with this thesis, as the farmers in this thesis have also undergone a transition towards a farm business with a SFSC. At first glance, the schematic relation overviews are straightforward and clear. This is also how most farmers felt about them. And although the schematic relation overviews do give an impression about the changes in relations of the farms over time, they may not be nuanced enough. Because farmer 7 said the following about the schematic relation overviews:

'In a sense that it is a process which changes constantly over time. And I can't divide it in, then we started with the cooperative. Because you do not have a before and after. That is not the case here. You basically just have a conductive period. Where you constantly add some relations. And lose some relations.'- Farmer 7

This remark of farmer 7 implies that the schematic relation overviews lack the ability to oversee the bigger picture, but also implies that changes in and around the farm are constantly happening and seeking for a new balance. Which is in line with the threefold embedding theory of Methorst et al., (2017). Moreover, the schematic relation overviews can better be viewed as additions to the timelines and transcripts.

The theory from Methorst et al. (2017) is well represented and reflected in the results of sub-question 2, 3 and 4. In a sense that when a farmer makes a strategic decision, in this case initiating or participating in a SFSC, the decision creates a reconfiguration of relations and eventually leads to a new embedding of the farm, the farmer and the farming practices. On top of that, embedding is an iterative process according to Methorst et al. (2017). The iterative processes are reflected in the

results about the evolvements of the farms. There it can be seen that the farm, the farmer and the farming practices go multiple times through the iterative cycle of re-embedding over time. On top of that, the socio-material theory of Roep (2000) was helpful for further deepening and enriching the theory of Methorst et al. (2017). In a sense that, the narrative of the results show that the evolvements of the farms are social as they are material. And how old and new elements from the farms need to find a new balance or re-organisation in order to function, how the farmer wants it to function. Or how new farm practices influence the material and social context of a farm and vice versa. All in all, the used theories from Methorst et al. (2017) and Roep (2000) were helpful theories for a better understanding of the evolvements and re-embedding processes of farms, farmers and farming practices.

An additional limitation of the research lays within the insider/outsider dynamics. Considering the fact that my parents own a farm with a farm shop, gives me access to insider information about details of rural life. As a result of this insider position, I had a bias even before I made my entry into the field. However, this insider position also facilitated a certain trust-building with the farmers, which allowed me to dig deeper into their motives, perspectives, activities and everyday life at the farms.

9. Conclusion

The purpose of this thesis was to focus on how farmers, their farming practices and farms are impacted by the initiation or participation in a SFSC. By examining 9 farmers, who were categorised as farmers who stayed independent, farmers who joined a network, and farmers who joined a cooperative. This was done with help of the theoretical three-fold embedding framework of Methorst et al. (2017) in combination with the socio-material theory of Roep (2000). The findings reveal that the initiation or participation in a SFSC does play an important role in the evolvement and embeddedness of the farmers, farms and farming practices. First of all, before a farmer decides to initiate a SFSC, most of the farms are comparable with other conventional farms. But when a farmer initiates a SFSC, the embeddedness of the farm changes and therefore also the farm itself changes, the farming practices changes and the farmer him or herself changes. First of all, most of the farmers have always highly valued independency and transparency. As time went by, and the SFSCs came into play, most of the farmers started to highly value sustainability and sociability. Secondly, the majority of the farms have frequently changed over time. The initiation in a SFSC caused visible changes on the farm in the forms of a farm shop or a room for the production of SFSC products. In some cases, the housing for the cattle also changes, mostly to more sustainable and animal-friendly sheds. Thirdly, the initiation in a SFSC came with a new set of farming practices. Most of them directly linked to the SFSC. Like for instance, operating a farm shop or producing SFSC products. But some of the new practices were farm related, like for instance reducing the amount of anti-biotics or pesticides used. In this thesis, some farmers decided to participate within a network or a cooperative after initiating a SFSC themselves. This, in turn, led to a re-embedding of the farm. The selected network of this thesis became a buyer of SFSC products from the farms. Therefore, the farms connected with a new value chain relation. However, the results show that there was no further impact on the farms, farmers and their farming practices. The selected cooperative of this thesis became a supplier of SFSC products for the farms. Here also the farms connected with a new value chain relation. However, one farm also became a supplier of cheese for the cooperative. Partly due to this relation, this farm was able to build a new and modern cheese factory. Furthermore, the cooperative provides assistance and support to the selected farmers in regard to their SFSCs. This assistance and support take on the form of offering a range of supplementary SFSC products for their farm shop assortment and by offering support and knowlegde in the field of farm shop design and advertising. Consequently, the selected farmers have adapted the appearance and design of their farm shop with the help of the cooperative. From this can be concluded that the participation in a cooperative does have an impact on farms, farmers and their farming practices. However, it differs per type SFSC and farm how large

this impact is. These general patterns were difficult to grasp, as every farm has its unique evolvement and embedding. On top of that, the changes due to the initiation or participation in a SFSC influence the perceived room for manoeuvre by the farmers, which influence the strategic decision making and therefore also indirectly influence the embedding of the farms, farmers, and farming practices (Methorst et al., 2017). However, the initiation or participation in a SFSC are not the only factors, which can play a role in the evolvement and embedding of farmers, farms, and farming practices. But are part of a whole complex system of influences, which evolve in iterative cycles. Overall, it can be concluded that the initiation or participation in a SFSC does have an impact on farmers, their farming practices and farms. But that the degree of impact differs per farm and per type of SFSC. Finally, the investigation and understanding on how farmers, their farming practices and farms are impacted by the initiation or participation in a SFSC could be further expanded by focussing on other types of farmers. Like for example, chicken farmers or horticultural farmers. As this thesis only focussed on farmers with dairy and meat producing animals like cows. Conversely, the evolvement and embedding of farmers, farms and farming practices of farmers who have not initiated or participated in a SFSC can be studied. Herewith, This approach is likely to make the impact caused by the initiation or participation in a SFSC more visible.

Data availability statement

Data is available on request of the authors.

References

Abma, R., Kirchholtes, U., Jansma, J. E., & Vijn, M. P. (2013). *Maatschappelijke kosten-batenanalyse stadslandbouw: de cases voedseltuin Rotterdam, de Nieuwe Warande en Hazennest Tilburg* (No. 562). PPO AGV.

Adam, K. L. (2006). *Community supported agriculture*. Butte, MT, USA: ATTRA-National Sustainable Agriculture Information Service.

Anderson, B., & McFarlane, C. (2011). Assemblage and geography. *Area*, *43*(2), 124-127.

Aouinait, C., Christen, D., Carlen, C., Mehauden, L., Mora, P., Massar, B., & Frederiks, M. (2022). Motivations and barriers for engagement in short food supply chains: Insights from european focus groups. *International Journal of Food Studies*, *11*.

Boerderij *de Blaak*. (n.d.). retrieved on 30 January 2023, from *https*://boerderijwinkeldeblaak.nl/boerderij/

Chiaverina, P., Drogué, S., Jacquet, F., Lev, L., & King, R. (2023a). Does short food supply chain participation improve farm economic performance? A meta-analysis. Agricultural Economics, 54(3), 400-413.

Chiaverina, P., Drogué, S., Jacquet, F., Lev, L., & King, R. P. (2023b). Farmer involvement in short food supply chains: a systematic literature review.

European Union. (2013). Regulation (EU) No. 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013R1305&from=EN.

Kumar, R. (2018). *Research methodology: A step-by-step guide for beginners*. Sage.

Methorst, R., Roep, D., Verstegen, J., & Wiskerke, J. S. (2017). Three-fold embedding: Farm development in relation to its socio-material context. Sustainability, 9(10), 1677.

Netherlands Code of Conduct for Research Integrity. (2018). Codes of conduct. Retrieved on 20 February 2023, From https://www.wur.nl/en/Education-Programmes/PhD-Programme/GraduateSchools/www.wur.nlwimek/PhD-information/Codes-of-conduct.htm

Ons unieke concept | Landwinkel. (N.d.). https://landwinkel.nl/ons-unieke-concept

Oregional - www.oregional.nl. (N.d.). *De mensen achter de regionale groothandel*. Oregional. https://www.oregional.nl/over-oregional

Renting, H., Marsden, T. K., & Banks, J. (2003). Understanding alternative food networks: exploring the role of short food supply chains in rural development. *Environment and planning A*, *35*(3), 393-411.

Roep, D., (2000). Vernieuwend Werken, Sporen van Vermogen en Onvermogen. PhD Thesis, Wageningen Universiteit, The Netherlands.

Roep, D., & Wiskerke, J. S. (2010). On governance, embedding and marketing: reflections on the construction of alternative sustainable food networks. *Journal of agricultural and environmental ethics*, *25*, 205-221.

van der Schans, J. W., & van Wonderen, D. (2019). *Korte ketens in Gelderland* (No. 2019-072). Wageningen Economic Research.

Tacken, G., Galama, J., Jaspers, P., Immink, V., & Aramyan, L. (2021). *Korteketenproducten in Nederland: Zijn horeca, catering en supermarkten geïnteresseerd in producten uit de regio* (No. 2021-013). Wageningen Economic Research.

van der Meulen, H., Jager, J., de Jong, D., Stokkers, R., Venema, G., & Vijn, M. (2022). *Kijk op multifunctionele landbouw: Omzet 2007-2020* (No. 2022-037). Wageningen Economic Research.

Van der Velde, J. (2020). *Exploring transition pathways to nature-inclusive farming* [Masterscriptie]. Wageningen universiteit.

Venema, G., Benus, M., van Everdingen, W., Puiser-Jansen, L., Splinter, G., Vijn, M. and van Wonderen, D. 2021. Agrarische produktie ten behoeve van de korte keten: een landelijke meting. Rapport Wageningen Economic Research. Report 2021-067

Wubben, E. F. M., Fondse, M., & Pascucci, S. (2013). The importance of stakeholder-initiatives for business models in short food supply chains: the case of the Netherlands. *Journal on Chain and Network science*, *13*(2), 139-149.

Zaalmink, B. W., Smit, C. T., Wielinga, H. E., Geerling-Eiff, F. A., & Hoogerwerf, L. (2007). Netwerkgereedschap voor vrije actoren: methoden en technieken voor het succesvol begeleiden van netwerken. Wageningen UR.

Annex

Interview guideline format (NL)

Introductie

Hallo, mijn naam is Juliët Vels en ik studeer MSc. Resilient farming and foodsystems aan de universiteit van Wageningen. Ik ben nu op het punt beland dat ik mijn master scriptie schrijf. Voor mijn onderzoek neem ik ook een aantal interviews af om zo data te kunnen verzamelen om daarmee de onderzoeksvragen te kunnen beantwoorden. Vandaar dat ik u ook heb benaderd voor een interview.

Doel van het onderzoek

Het doel van het onderzoek is om erachter te komen hoe het initiëren of het participeren in een korte keten impact heeft gehad en nog steeds heeft op de boer zelf, de landbouwpraktijken en de boerderij. Hierbij zoom ik in op boeren met een boerderijwinkel aan huis, boeren die samenwerken in een coöperatie en boeren die zich hebben aangesloten bij een regionaal netwerk. Binnen dit onderzoek wordt een korte keten gezien als *'een korte toeleveringsketen bestaande uit een beperkt aantal marktdeelnemers die streven naar samenwerking, plaatselijke economische ontwikkeling en nauwe geografische en sociale betrekkingen tussen producenten, verwerkers en consumenten, waarbij er geen of maximaal twee ketenpartijen tussen de boer en de consument aanwezig zijn en waarbij de boer als leverancier van het product herkenbaar is voor de consument'* (Tacken et al., 2021, p.14)

Reden van dit interview

Ik wil u interviewen omdat u een boer bent die een korte keten heeft geïnitieerd of in een korte keten participeert.

Belangrijke mededelingen

Voordat het interview begint wil ik u eerst nog een aantal dingen uitleggen. Dit heeft te maken met hoe ik het interview samen met u wil gaan aanpakken. Voor u liggen 3 of 4 lege vellen. En wij zullen al interviewend op deze vellen schetsen gaan maken. Schets 1 zal een tijdlijn worden, hierop zullen we de belangrijkste wijzigingen voor u en uw bedrijf van de afgelopen jaren in kaart proberen te brengen. En met name de wijzigingen die betrekking hebben tot de korte keten. Schets 2 zal een schematische weergave worden van alle relaties die u had of nog steeds heeft met mensen of bedrijven voordat u begon met de korte keten. Dus alle relaties die u had of nog steeds heeft om uw bedrijf draaiende te houden. Om een voorbeeld te geven: de relatie die een boeren bedrijf bijvoorbeeld kan hebben met een loonwerkersbedrijf. Schets 3 zal ook een schematische weergave worden van relaties, maar dan van de relaties die u heeft opgebouwd sinds dat u begon met de korte keten. En schets 4, mocht dit van toepassing zijn, zal ook een schematische weergave worden van relaties, maar dan van de relaties die u heeft opgebouwd sinds dat u zich heeft aangesloten bij een coöperatie of netwerk.

Kanttekeningen

Het stukje tekst *'het opzetten van een korte keten of met het participeren in een korte keten'* wordt tijdens de interviews ter plekke vervangen met de actuele naam van de korte keten zelf. Daarbij zijn de onderstaande interview vragen voorbeeld vragen. Dit zijn voorbeelden die de algehele strekking van het interview weergeven. Niet alleen de vragen maar ook de volgorde van vragen kunnen verschillen per interview.

Voorbeeld interview vragen

- Wat voor een bedrijf heeft u?
- Wanneer bent u begonnen met het opzetten van een korte keten of met het participeren in een korte keten?
- Hoe zag dit in het begin er uit?
- Waarom bent u begonnen met het opzetten van een korte keten of met het participeren in een korte keten?
- Wat waren uw doelen toen u begon met het opzetten van een korte keten of met het participeren in een korte keten?
- Zijn deze doelen en uw motivatie door de tijd heen verandert?
- Wat is de rol van netwerk/coöperatie (naam) waar uw bedrijf zich bij heeft aangesloten?
- Waarom heeft u gekozen voor deze vorm van een korte keten? En bijvoorbeeld niet voor een bestaand netwerk, coöperatie met andere boeren of zelfstandig iets beginnen?
- Wat zijn de reacties vanuit uw omgeving dat u een korte keten bent gestart?
- Wat doen deze reacties met u?

- U vertelde net al hoe uw bedrijf er in het begin van het opzetten van een korte keten of met het participeren in een korte keten er uit zag. Hoe is uw bedrijf verder door de tijd heen zichtbaar verandert tot aan nu?
- Wanneer vonden deze veranderingen plaats?
- Waarom of waardoor is dit verandert?
- Denkt u dat deze veranderingen zijn gekomen door het opzetten van een korte keten of met het participeren in een korte keten?

- Met de veranderingen die door de tijd heen zichtbaar zijn geworden op uw bedrijf, zijn daarmee ook de handelingen die u uitvoert verandert? (Met handelingen bedoel ik de dagelijkse dingen die u doet om uw bedrijf draaiende te houden)
- Zo ja, hoe?
- Waarom zijn ze verandert?
- Zo nee, waarom niet?

- Wat vindt u belangrijk als boer(in) zijnde, voor uw bedrijf en uzelf?
- Wat vond u vroeger belangrijk als boer(in) zijnde, voor uw bedrijf en uzelf, voordat u begon met het opzetten van een korte keten of met het participeren in een korte keten?
- Als het verandert is, waardoor komt dit?
- Denkt u dat dit komt door de korte keten?
- Hoe zou u uw manier van boeren op dit moment omschrijven?
- Hoe zou u uw manier van boeren omschrijven voordat u begon met het meedraaien in een korte keten?
- Als het verandert is, denkt u dat dit komt door de korte keten?

Voorbeeld interview vragen voor schematische weergaves

- Welke (zakelijke) relaties had u voordat u begon met de korte keten?
- Wat voor een product(en) produceerde u met uw bedrijf voor dat u begon met een korte keten?
- Bij welke bedrijven of klanten zette u deze producten af?
- Aan wie verkocht u dit/deze product(en)?
- Bij welk bedrijf haalde u ‘product X’ vandaan?
- Hoe zou u het contact met deze relaties van vroeger omschrijven voordat u begon met de korte keten?
- Hoe beïnvloedde het contact met de leveranciers en afnemers van uw product(en) de ontwikkeling van uw bedrijf?

- Met welke bedrijven of personen heeft u relaties opgebouwd sinds dat u begon met de korte keten?
- Wat voor een product(en) worden er geproduceerd op uw bedrijf?
- Welke product(en) worden afgezet in de korte keten?
- Bij welke bedrijven of klanten zet u deze producten af?
- Aan wie verkoopt u dit/deze product(en)?
- Bij welk bedrijf haalt u 'product X' vandaan?
- Hoe zou u het contact met deze huidige relaties omschrijven?
- Hoe beïnvloedt het contact met de leveranciers en afnemers van uw product(en) de ontwikkeling van uw bedrijf?

Voorbeeld afsluitende interview vragen

- Wat als u geen korte keten was gestart, wat was dan het alternatieve model voor uw bedrijf geweest?
- Heeft u nog wensen in de toekomst met betrekking tot de korte keten?
- Hoe gaat u dit realiseren?

Consent form interview empty (NL)

Toestemmingsformulier interview:		
Gaat u ermee akkoord dat er een audio-opname wordt gemaakt van het interview?	Ja	Nee
Gaat u ermee akkoord dat uw antwoorden worden verwerkt in een transcript en gebruikt zullen worden voor verder onderzoek?	Ja	Nee
Mag uw naam worden genoemd in het onderzoek?	Ja	Nee
Datum: Handtekening van de geïnterviewde: X _____	Datum: Handtekening van de interviewer X _____	

Disclosure AI-use

In the present time, ethical research practices include the responsible and ethical use of artificial intelligence. Within the context of this thesis, I have used AI in the following ways: First of all, I used tools as Google translate and Deepl in order to enhance the readability of my writing in English. I have found writing in an academic English style difficult, as English is not my native language. Secondly, I have used AI as a tool to structure gathered information in order to create a draft of the profiles of the farms. Subsequently, I have reviewed, revised and rewritten the content of the profiles in accordance to my preferences and ideas.