

NORWEGIAN UNIVERSITY OF LIFE SCIENCES



Table of contents

Abstract	iv
Norwegian abstract	v
Acknowledgements	vi
Introduction.....	1
1.1. Setting the stage.....	1
1.2. Previous research	1
1.3. Agroecology.....	2
1.4. The farm and the farmer in context	3
1.5. My research questions	4
1.6. Aim and scope of the thesis	4
1.7. The farm and the farmer – an introduction	4
1.8. The interview participants.....	5
1.8.1. Signe	5
1.8.2. Kristine.....	6
1.8.3. Eyvind	6
1.8.4. Sebastian	6
1.8.5. Ingeborg.....	7
1.8.6. Edvard.....	7
2. Method and methodology	7
2.1. Pre-understanding.....	7
2.2. Phenomenology.....	8
2.3. Case study.....	8
2.4. Selecting the informants	8
2.5. The interview.....	9
2.5.1. Interview guide.....	9
2.5.2. Reflections on the interview process	10
2.5.3. The place of the interview.....	11
3. Results and interpretations	12
3.1. Research Question 1.....	12
3.1.1. Research question 1a:	13
3.1.1.2. The farmer as a teacher.....	14
3.1.2. Results and interpretation Research question 1b).....	17

3.1.2.1.	How do the former pupils understand food systems?	17
3.1.2.2	Views of the interview participant with no post involvement with Ryeland farm	17
3.1.2.3	Views of the participants with post-involvement of Ryeland Farm	21
3.2.	Results and interpretation research question 2.....	24
3.2.1	Which stories are told from the farm, and which aspects of the farm experience are important to the former pupils?	24
3.2.2	What stands out?	24
3.2.3	The social aspect and effects of the farm	25
3.2.4	The meals	25
3.2.5	About the farmer	26
3.2.6	The animals.....	27
3.2.7	Getting through challenges	28
3.2.8	Influential farm stay	29
4.	Discussion	30
5.	Further research	33
6.	Conclusions.....	34
	References.....	36

Appendix I: Interview guide (in Norwegian)

Appendix II: Consent form

Appendix III: More information about the farmer and farm activities

Abstract

The setting of this study is on a small family farm in the south eastern part of Norway in relative proximity to urban areas. The farm has cooperated with a lower secondary school since 1998, and as such, has provided many teenagers with practical and hands-on experiences from farm work in all seasons. This is a case study of practical farm experiences and the possible impacts this may have on the understanding of the food system. Underlying is an assumption that a healthy economy ultimately depends on a healthy environment (Gliessman 2007). Understanding the mechanisms of the ecological foundations of the earth may be one step in the right direction of supporting these foundations. The practical farm experience was a one-week experience at an organic dairy farm once a year for three years. The tasks performed on the farm were designed to illustrate food's path "from seed to table". Each week on the farm had different tasks. The activities on the farm were fully integrated in the local school's curriculum. The research questions were 1) how does the interview participants' understanding of food and farming systems correspond with the principles and goals of the farmer? and 2) which stories are told from the farm, and which aspects of the farm experience are important to the former pupils? The results show that the interview participants see some connections in the food system, but do not see themselves as actors within it. The stories that are told from the farm are mainly about the social aspects, the animals, the meals and the farmer. The aspects of practical work and getting through challenges are less often mentioned and the connections between the farm (the small picture) and the global food system (the big picture) is a story that is not told.

Norwegian abstract

Denne studien tar utgangspunkt i en liten familiegård i den sørøstlige delen av Norge, i relativ nærhet til urbane områder. Gården har samarbeidet med en ungdomsskole siden 1998 og har, således, gitt mange tenåringer praktisk erfaring med gårdsarbeid gjennom alle årets sesonger.

Dette er en case studie av praktisk gårdsarbeid og mulige virkninger dette kan ha på forståelsen av matsystemer. Den underliggende antagelsen er at en sunn økonomi er grunnleggende avhengig av et sunt miljø (Gliessman 2007). Å forstå mekanismene bak jordens økologiske byggeklosser kan være et steg i retning av å støtte disse byggeklossene.

Det praktiske gårdsoppholdet var et ukeslangt eksperiment på en økologisk melkegård. Elevene brukte én uke året over en periode på tre år. Oppgavene på gården var laget med tanke på å vise matens vei fra jord til bord. Hver uke på gården besto av ulike oppgaver. Aktivitetene på gården var tett knyttet opp til skolens kompetansemål.

Forskningsspørsmålene var:

1. hvordan samsvarer intervjuobjektene forståelse av mat- og gårdsystemer med bondens mål og prinsipper?
2. hvilke historier fra gårdsoppholdet trekkes fram, og hvilke aspekter av gårdsoppholdet var viktige for de tidligere elevene?

Resultatene viser at intervjuobjektene til dels ser sammenhenger i matsystemet, men at de ikke ser seg selv som aktører innenfor det. Historiene som fortelles fra gården består i hovedsak av de sosiale aspektene, dyrene, måltidene og bonden. Sidene ved det praktiske arbeidet og det å komme seg gjennom utfordringer er i mindre grad nevnt. Sammenhengen mellom gården (det lille bildet) og det globale matsystemet (det store bildet) er en historie som ikke fortelles.

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Introduction

1.1. Setting the stage

In June 1992, a global event took place that made precedence for local initiatives and cooperation between local actors and governments on one particular topic (St. meld. nr. 29 1997-98): five years after the term sustainable development was introduced by the Brundtland commission (Börlund 2005), the Earth Summit held in Rio de Janeiro in 1992 put the term on the political agenda and it became part of the political discourse (Barth & Thomas 2012). One important outcome of the Rio Summit was the Agenda 21, a 351-page “comprehensive plan of action to be taken globally, nationally and locally [...] in every area in which human impacts [sic] on the environment” (*Agenda 21* ; United Nations Conference on Environment and Development 1992). This plan of action was also undertaken in Norway, and a special focus was made on the local level, and local charters were developed called Local Agenda 21 (LA 21) between local governments and citizens, and a special focus was meant to be on areas “where there is a clear connection between local action and global consequences” (St. meld. nr. 29 1997-98, section 5.2.7, own translation).

1.2. Previous research

There are several terms used for research that encompasses nature, humans and knowledge of nature. One of these research fields that also includes practical work is green care that describes the “utilization of agricultural farms as a base for promoting human mental and physical health and social well-being” using animals, the plants, the garden, the forest and the landscape (Van Dijk & Hassink 2006, preface). Another research field is studies in environmental education, that looks at how education effectively can teach children and youth skills and knowledge that deal with environmental, societal and economical sustainability issues (Nipen 2012; UNESCO 2006). In the following paragraphs I will give a short overview of research within these fields in order to set the stage for my research findings. My interest lies within these two research fields, in a sense. Using agriculture as a tool can both be used for issues concerning health and for general education. I see the two fields touch upon each other, but focus on two different but adjacent aspects; improving individual health (green care) or teaching about ecological foundations that support us, with a long term goal of creating responsible citizens that can be agents of change. However, it may be difficult to create a clear separation between these two fields, as they both look into the connections between humans and nature.

1.3. Agroecology

'Food systems' is a fundamental term in agroecology. The agroecologist Stephen Gliessman (2007) has an overarching definition:

"Food systems have a global breadth and comprise all aspects of food production, distribution, and consumption. They include the relationship among landowners and farmworkers, farmers and food consumers, citizens of developed countries and citizens of developing countries; the political systems that control these relationships; the social structures that influence how people relate to food production and consumption; and the cultural systems that influence what people believe and value." (p. 344).

I will only attempt to highlight parts of this system, namely young adults' understanding of the food systems after doing practical work on a farm for one week each year during lower secondary education. In line with agroecological thinking, I will use the term farming systems that encompasses the activities and processes that take place on a farm. If food systems, as defined above, represent the big picture, then farming systems represent the small picture. What makes Ryeland Farm interesting from an agroecological perspective is that the farmer's goals and principles fall right within the food systems approach. But before I present my research questions and Ryeland Farm properly, I will look at some previous research relevant to the topic of sustainable education and food systems knowledge.

An underlying assumption framing this research report is that "a healthy economy ultimately depends on a healthy environment" (Gliessman 2007, p. 343) and that we need both in order to have a sustainable future.

A study from the USA found that inner city youth participating in a garden programme showed a better understanding of the food systems than those in the control group, and it is noted that the programme posed a significant social influence in the participants (Lautenschlager & Smith 2007). A different term, but connected to issues similar to my research field in that it touches upon the general benefits of being exposed to nature and natural processes, exposure to the cycles of nature, being outdoors and doing something physical, is research on community gardens. Community gardens are commonly not organised by schools as school gardens are but by an organisation or local governments. They are essentially public gardens "in terms of ownership, access and degree of democratic control" (Ferris et al. 2001, p. 560), and are called allotments in Europe. Community gardens are tightly linked with Local Agenda 21 initiatives and Ferris et al.'s identify allotments/community gardens to be one solution in endeavouring to restore economically

impoverished, mainly urban areas which struggle with social and economic inequality, to ecological and social health (Ferris et al. 2001). Yet another programme, mostly present in the USA, is the Farm-to-School initiative. It represents a collaboration between a school and a farmer with specific focus on food supplies from the farmer; “fresh, local foods to school services” (Kloppenburger et al. 2008). Farm-to-School initiatives are often coined with school gardens, which have been successful in some areas, incorporating agriculture in to the curriculum. (Graham et al. 2004). Research has been performed to see if these programmes can improve nutritional choices or knowledge of the processes “from seed to table”. A comprehensive review study made by Joshi et al. (2008) reports some studies that show an increased knowledge of growing cycles, sustainable agriculture and gardening skills (Murphy, J.M 2003 and Triant, S.L. & A. Ryan 2005 in Joshi et al. 2008) in addition to the aspect of healthier food and nutrition knowledge (Graham et al. 2004). Farm-to-School initiatives are mostly relevant where the schools have food services or cafeterias. This is not the case in Norway, where the packed lunch has become the norm (Døving 2003). This means that actors who want to link the land and the classroom (like Kloppenburger et al. (2008)‘s lunchroom) must find other ways to cooperate with schools. Advancement made by researchers at the Norwegian University of Life Sciences (Jolly 2009; Krogh & Olsen 2005) has made this link using the term ‘the farm as a pedagogical resource’, and have in part enabled farmers and teachers to start cooperating with local farms/schools in order to allow pupils practical experience with the farming system.

1.4. The farm and the farmer in context

The cooperation between the farm Hegli and the lower secondary school can be entered into a global context of education for sustainability (EfS) – which “emphasizes aspects of learning that enhances the transition towards sustainability” (Barth & Thomas 2012, p. 1) and also into the framework of education for sustainable development (ESD), an umbrella term developed by UNESCO to connect different aspects of education that aim to “acquire a better understanding of the complex interdependence between human needs and the natural environment, between socio-economic development and culture, and between the local and the global” (UNESCO 2006, p. 12). Similarly, the Norwegian government has produced strategy documents on how to reach this goal within schools (*Kunnskap for en felles fremtid. Revidert strategi for utdanning for bærekraftig framtid* 2012-2015). The students’ farm experience at Hegli thus enters under a greater context than merely being a week out of the classroom. And the farmer manoeuvres in a field that is relatively new (UNESCO 2006, p.

22), but which does not lack in supportive documents and frameworks (cf. *Kunnskap for en felles fremtid. Revidert strategi for utdanning for bærekraftig framtid 2012-2015*) One of my questions underlying this thesis is whether or not the students understand the connection between the local and the global, and to which degree they bring these experiences with them in to their futures.

1.5. My research questions

The farmer is concerned and interested in agriculture from both a local and a global perspective, and how these are connected. She has developed an all-year programme for all the pupils at the local lower secondary school. A limitation of the programme is that it is a relatively brief introduction into farm activities, but still comprehensive. The farmer invests time in helping the pupils see the links in our food system. My research question is therefore how former farm participants' understanding of the food corresponds with the farmer's principles and goals. My second research question is which stories are told from the farm several years after the experience took place? This may indicate what is remembered and valuable to the participants. An overarching question that has inspired me in this research process is whether it is possible to answer the following: can practical experience with the food and farming system encourage pro-environmental behaviour?

1.6. Aim and scope of the thesis

My aim in writing this thesis is to offer a descriptive and interpretative approach to food system knowledge through practical experience from farms and a discussion of its possible impacts on food system behaviour and awareness. I am not attempting to investigate the didactical challenges and outcomes of the farm-school cooperation (Andresen 2011). Neither am I attempting to create causal relationship between the actions that were at the farm – the past – and the actions that are – the present. This follows from choosing a qualitative methodology (Postholm 2011; Yin 2009). I do, however, wish to highlight some of the challenges we face in understanding the complexity and interdependence of food systems, and how activities aimed at broadening this understanding may contribute towards such understanding and a possible direction towards action.

1.7. The farm and the farmer – an introduction

The farmer is given a pseudonym in order to ensure the interview informants' anonymity. I have chosen to call her Anne, and the farm Ryeland Farm. 'Ryeland Farm' is situated in a rural area in the south-eastern part of Norway. Anne has been farming since 1966, but she is also a teacher. This is a typical trait in collaboration projects between farms and schools – that

the farmer or the farmer's spouse has additional competence most often within teaching or from health care (Krogh & Olsen 2005). In contrast to what school-farm connections have in the past, Ryeland Farm's work with the local school should be seen in a context stemming from courses at the Agricultural University of Norway (AUN/NLH, now Norwegian University of Life Sciences, UMB) that put emphasis on "participation over time that allows a greater identification and provides an alternative arena for children with differing capabilities to use their talents" (Jolly et al. 2004). As I recognize this, I enter from the field of agroecology and wish to see this programme in light of a food system perspective. After preliminary talks with the farmer, it became clear that despite the goals of creating these projects connecting schools and farms, the farmer's perspective was in line with agroecological thinking.

1.8. The interview participants

In this section, I will present the interview participants and the farmer. In order to ensure anonymity, all names have been changed. Signe, Eyvind and Sebastian all share that they did not grow up on a farm, they live in the city and they have had no involvement with the farm after they finished lower secondary school. Edvard is not from a farm, lives in the city and has later worked on the farm as a teacher. Kristine lives in the countryside, is from a farm and has had indirect experience with the farm through her university studies. Ingeborg is from a farm, now lives in the countryside and has had no post-involvement with the farm. Below is a table showing the demographic details of the interview participants. Following this is a brief presentation of each where I present their backgrounds and current food habits.

Name	Age	Gender	From farm	Current living situation	Post-involvement farm
Signe	19	F	No	In the city	No
Kristine	24	F	Yes	In countryside	Yes
Eyvind	25	M	No	In the city	No
Sebastian	23	M	No	In the city	No
Ingeborg	22	F	Yes	In the countryside	No
Edvard	22	M	No	In the city	Yes

TABLE 1. *Demographic representation of interview participants.*

1.8.1. Signe

Signe lives in the city, and studies at the university. She has had no involvement with Ryeland Farm after finishing lower secondary education. She is very fond of eating fish, but thinks it is difficult to find fresh fish in the city. She grew up eating ready-made or semi-finished food

products, except from fresh fish meals. Today, she rarely buys semi-finished products or instant soups, but eats taco, combinations of chicken and rice, and some fish. She often forgets to buy vegetables, and when she does it is mainly tomatoes and cucumber. Slices of bread with fish or meat spreads are also part of her diet. She does not buy organic food, and buys eggs in 24-piece cartons.

1.8.2. Kristine

Kristine lives in a small rural town, and studies at the university. She has had indirect involvement with Ryeland Farm as it is often used as an example in her teaching studies at the university as an example farm for school-farm cooperation. Part of this has been reading about mechanisms supporting such projects, and visiting organic farms. She grew up on an industrialised farm, with dairy cows and turkeys. She says she has a varied diet, with a lot of fish and chicken – “from our wonderful chicken production” – and meat. She makes her own bread and do not like to eat full- or semi-finished foods, but prefers making food from scratch. She prefers to buy Norwegian food, and sometimes buys local food.

1.8.3. Eyvind

Eyvind lives in the city, and works with media. He has had no involvement with Ryeland Farm after he finished lower secondary education ten years ago. He thinks it is difficult to explain what he eats, but describes it as varied; sometimes a ready-made pizza and sometimes dishes made from scratch. He says he does not reflect on the choices he makes when he goes food shopping. His choices are founded on whether or not he has tried the food item before and, if he was happy with it, he will buy it again. He does not buy the low-price food items, and buys organic milk, and fair trade coffee. He thinks that organic food has a “good-guys feel” to it but he is not sure why: “I know that they [sic] maybe are treated better, and are a little less processed. That’s how I view it.” The concept of local food is unfamiliar.

1.8.4. Sebastian

Sebastian lives in the city and goes to the university. He has had no post-involvement with Ryeland Farm. He appreciates being outdoors and in nature. He eats meat, he says, and “plenty of vegetables”. He is fond of chicken, as he says it is both tasty and healthy. He says he thinks he eats more vegetables than what is considered ‘typical’ for Norwegians. He is

only moderately interested in cooking, but tries to eat healthy and not to eat too much sugar. He says of himself that he is a typical “city person”.

1.8.5. Ingeborg

Ingeborg is from a farm, but her parents have chosen to stop their animal husbandry practice. She lives in a rural small town, and commutes to the university. She does not think of herself as a city person, rather the contrary, she says. Already as a five year old, she partook in preparing meat in to e.g. minced meat after an animal had been butchered on their farm. She says that she is aware of what she eats, and says that she would rather buy a Norwegian cucumber than one from another country and adds that she likes to support the food producers in her own country.

1.8.6. Edvard

Edvard is not from a farm, but has worked at Ryeland Farm after he finished his lower secondary education. He also has experience as a volunteer worker on farms abroad. He is now a student at the university. He says of himself that he is “almost overactive” and he has strong political opinions. Food-wise, Edvard says he eats everything and sometimes he goes dumpster diving (finding food that shops have removed from the shelves due to expiry date). He says that using (Norwegian) mountainous areas for food production (meat) is the best way to use a country’s resource.

2. Method and methodology

In my methods section, I will talk about pre-understanding, and give a brief introduction to phenomenology, the research strategy and research method, the selection process, describe the interview and explain the need for an interview guide. This section ends with a reflection of the method and my choices.

2.1. Pre-understanding

Every person goes in to a situation with pre-knowledge; we never go in to a situation with a “clean slate”. Our pre-knowledge shapes the questions we ask, how we ask them and who we select as informants (Nilssen 2012), as well as our expectations of answers. One example of pre-knowledge that may have shaped this research process is that I have experience from farming systems where I have met farmers who were very strong role models and influential capacities in my life. This may influence the expectations I enter into this research with.

2.2. Phenomenology

The semi-structured interview is in part inspired by phenomenology, in order to explore the life world of the participant (Kvale & Brinkmann 2009). A traditional phenomenologist is interested in how humans experience life world phenomena, whereas “hermeneutical scholars address the interpretation of meaning” (Kvale & Brinkmann 2009, p. 14). In some regards, I am taking the stance of both; I am interested in the experiences of the phenomena (the farm) but want to find out how they have interpreted this experience.

2.3. Case study

A case study is in this case a research strategy, which attempts to “give a detailed description of the studied case in context” and is limited both in time and space (Postholm 2011). It can offer an exploration of experiences and events in daily life (Yin 1994 in Postholm 2011). Case study as a strategy has no prescribed method; they can be either quantitative or qualitative. I therefore looked at my research question and saw that using case study as a research strategy best could answer the research questions, and also fit the criteria of Yin (2009): if the research questions are best answered with *how* and *why* questions, require no control of events and focus on contemporary events, then the case study is appropriate. The research method chosen was the semi-structured interview.

2.4. Selecting the informants

The informants were selected through strategic selection criteria: they had to be former pupils of the lower secondary school near Ryeland Farm, as the experience from this farm was the case to be studied.

Selecting interview participants randomly may not always be productive, as was the case of my first attempt to find former pupils from the particular area. A first set of possible interview participants was identified through a list from the school, and contacted by telephone. Several people changed their minds about participating, noting “little time” as the main reason for backing out. I decided to use the snow-ball effect to help me identify possible interview participants, after I ran into Edvard by chance at an event. This led me to Signe, Sebastian, Eyvind and Ingeborg. Kristine was identified through common acquaintances. Social media was in part used to submit my contact to alumni of the particular school through one of the participants, in that way the interested alumni could contact me (instead of the other way around). A brief introduction of my research interest was written together with my contact details. A limitation of this is that the interview participants are acquainted with one another, and there is a chance there is little demographic diversity (family background, economics,

education status etc.). At the same time, I was not aiming for an analytic generalizability, in which case I should have chosen a different research strategy and method, cf. a survey. (Yin 2009)

All my interviewees had finished 9 years of school and were either finished with a degree in higher education or in the middle of one.

2.5. The interview

A semi-structured interview was carried out with six former students, the farmer and an employee at the school. The administrative employee's interview served more as background information, and as the research progress moved along I decided not to include it in the final report as it is deemed more fit for other research questions like the practical and organisational obstacles surrounding such a programme.

2.5.1. Interview guide

An interview guide was developed beforehand, and revised before the interview. It is recommended that a test run of the interview is conducted in order to see which questions work and which do not work. A semi-formal pilot interview was done with a friend, who answered the questions as best she could, to identify whether or not the wording of the questions I had made was understandable, and to make sure that the amount of time spent on the interview amounted to approximately one hour. One hour was chosen as it was deemed an amount that is acceptable to ask someone to spend on an interview with a stranger. People have busy schedules and I did not want the interview to seem like an interrogation that would last for a long time. Information about the amount of time was given in the initial contact-making phase of the data collection. I also deemed it to be sufficient time to receive interesting information, but it also needed to be enough time to create a safe space between me as the interviewer and the interviewee. As a last criterion, the time allocated needed to offer some leeway (both ways) regarding the amount of time, to make space for possible dwelling on particular aspects of certain statements. The informal pilot interview showed that the interview would take about 45 minutes. An additional result of the informal pilot interview led to minor changes to the sequence of the questions. It is possible that if I had done a more formal pilot interview with a former student from the school, I would have identified questions that yielded answers that might not be useful in answering my research question. The interview guide is added to this thesis as Appendix 1.

2.5.2. Reflections on the interview process

The interviewees were largely asked the same questions, but the sequence of the questions were sometimes amended relating to which direction the interviewee made during the interview or which topic she or he touched upon. Questions were also amended during an interview, in relation to the interviewee's current situation and answers. The interview guide worked only as a guideline and a cheat-sheet for the interviewer to ensure the quality of the interview.

The interview was structured as a semi-structured interview (Kvale & Brinkmann 2009) and an objective was to ask open-ended questions, to give the informant room for his or her meanings and nuances. It proved to be harder than expected, to make the questions properly open ended, and I experienced that when an interviewee had a high level of knowledge on the topic of food, food politics and educational issues, it was harder to keep the questions open ended. It seemed the interviewee provided what he or she believed was the "correct answer" despite there being no correct answer to the questions. It was as if the interviewee knew what I wanted to know. This interview ended up being the most difficult one to interpret. At least I felt like the questions were highly leading.

At the same time, it was a fully conscious choice to make the interview similar to a conversation between two actors. Likewise, it was a deliberate choice to share my own opinion and knowledge, where it felt natural. I informed about this in the beginning of each interview. The interview had more the form of a dialogue than of a Q & A session. It is important to acknowledge in the interview situation that all actors, both the interviewer and the interviewee enter a situation with a significant amount of pre-knowledge, which forms the interviewee's interpretation of the questions and our answer, and the interviewer's interpretation of the answers (Kvale & Brinkmann 2009; Postholm 2011).

Some of the interviewees were more verbally comfortable than the others and talked a lot. Some had thought more about the topic than others and gave little beyond concentrated answers.

Meaning condensation is recommended by Kvale and Brinkmann (2009) as a tool in the interview setting in order to make sure the interviewer has understood the answer or stories of the interview participants. I, however, chose not to utilise this tool, as for me to do this would make me very formal, something I wanted to avoid. In hindsight, however, I see that there were several times where I should have prodded the answer a bit more and got "more

meaning” out of them. I was often quick to move on to the next question if I saw they were struggling to come up with an answer or answered vaguely, something I would have changed if I were to use the interview technique again.

2.5.3. The place of the interview

I attempted to choose neutral places for the interviews, in order to make the interviewees feel at ease, instead of a place where I might be thought to expect something (e.g. in my home) in return, or a place where I would intrude their privacy. All the interviews took place in public caf  s, with the exception of one that took place in an office. All the interviews were performed in the vicinity of the interviewee’s work place or university. This was mainly done to minimize the effort on the interviewee’s side. I, as the interviewer, travelled to each of these destinations to meet the interviewees.

In the beginning of the interview, before I turned on the recorder, I informed again about my project, a little more in detail this time, and about my educational background. I also took heed in explaining the concept of agroecology – my experience indicated that this field of study is unknown to many people. I stated the intention of the thesis and the goal of the interview – which was to talk about food in general and food politics, in addition to memories from the farm whilst at school. I emphasized my desire and goal that the interview would be more like a conversation than a formal interview, and informed them that I would be sharing my own personal opinion sometimes, and that they should not be confused by this, but see it as a way of conversing around the topic. I explained to them that I was not neutral on this topic, and that my impressions and opinions would not necessarily come across as neutral, either. I made this as clear as possible, in order to lessen the chance of the interviewee feeling as if he or she was in a situation of interrogation – a common pitfall when conducting interviews. By putting emphasis on the dialogue, the tense or formal atmosphere may be loosened, and will, ideally, let ideas and comments move back and forth between interviewer and interviewee.

Before we started the interview, the interviewee was given a consent form with information about the project, the time frame of the thesis and information about the opportunity to withdraw from the project at any time without giving any reason. This was signed by the interviewee before we started. The interviewee was offered to keep a copy of the Consent Form.

I made sure that the interviewee knew when I was going to switch on the recording device, and when I was going to switch it off. I asked if they had any questions, both before the interview started (before the recording device was turned on) and after I had finished the interview and turned the recording device off. After the interview we talked a little bit about various topics. This can be just as important a part of an interview as the interview itself. It is therefore recommended that the interviewer takes notes after each interview in order to follow the information that was not recorded. No one seemed to have questions related to the interview process, and I therefore did not think to ask them what they thought about it either, though I see in retrospect I could have asked this question.

3. Results and interpretations

In the following sections I will present the results that respond to each research question. I have included illustrative statements from the interviewees and then a subsequent interpretation is offered. The research question belonging to each is noted in the beginning of the passage.

3.1. Research Question 1

How does the interview participants' understanding of food and farming systems correspond with the principles and goals of the farmer?

I have divided the work on this research question into two parts, as it actually could be said to consist of at least two sub-questions:

- a) What are the farmer's main principles and goals guiding her in the work of having youth on her farm every week?
- b) How do the interview participants understand food systems?

To conclude this section, an attempt is made to tie them up in order to answer the main research question.

To start with I had to identify the main principles and goals of the farmer, and then relate it to how food systems are viewed and explained by the former participants on the farm. In this context it must be noted that the farmer has a very thorough and holistic view of the food and farming system, something that I will discuss in the following section. I will then proceed to present the interview participants' understanding of the food system.

3.1.1. Research question 1a:

What are the farmer's main principles and goals behind having youth on her farm in a comprehensive programme?

In this section, I will start by presenting the farmer's main principles and goals behind having pupils on her farm every week of the year. The farmer is essential in this project as a creator, facilitator and a possible significant adult for the pupils. All the pupils meet her. In order to delve into the pupils' experience, it is necessary to first get a picture of the goals and principles the farmer has. I have divided the sections according to themes that presented themselves during the course of this study.

3.1.1.1. *The farmer as farmer*

When asked what she likes the best about being a farmer, she says:

“The animals. Yes. And the big picture.”

I ask her what she means with the big picture. When I ask her if she means how things are connected, she confirms and adds

“And also the fact that I find it to be right. Literally useful (‘matnyttig’).”

The use of the word ‘matnyttig’ needs to be explained; otherwise too much meaning is lost in translation. This term means useful, but the word ‘matnyttig’ consists of two words; food – ‘mat’ and useful ‘nyttig’, which points to a dual meaning signalling that it is useful for providing food. In other words, it is not only useful to be a farmer, there is an aspect of something fundamentally important; the action of food production has a useful purpose that is beyond the importance of the one farmer; it will benefit all the people who receive the production outcome.

Another principles she has is that

“[...] [T]he food production should take place where people are and primarily meet the needs of the people who reside in the area before you export. And not dump the food.”

This tells me she is concerned over democratic issues and, in particular, food access. One interpretation of this stance is that it is wrong to import food if the exported food comes from

areas in which people cannot afford or otherwise are hindered in accessing food. It also shows that she has a strong stance against food waste.

3.1.1.2. The farmer as a teacher

Her philosophy behind having youth on her farm in a pedagogical perspective can be illustrated by the following statements, and was from one of her first experiences taking pupils out of the classroom and into the forest (as a teacher):

“[...] [T]he pupil you see in the classroom is just the one side of the pupil”

She discovered other sides of and different reactions from the students than she sees in the classroom. I think this is a key principle for her – to allow different skills and experience to develop in a setting that is not the classroom.

“I brought some pupils to [an open air museum] and [...] they behaved very well, listened, took notes, sent thank you notes, etc. But still, they were passive [while they were there]. The pupils are so used to standing, watching and listening that they are not used to use other parts of their bodies. Then [when they stand and watch etc.] it is easy [for the pupil] to fall asleep...”

And:

“Many children eat terribly unhealthy, sit too much in front of their [TV or computer] games and move too little. These issues are perhaps the biggest motivation for us to continue!”

She wants to create a space where there is room for movement, where the pupils can use their bodies. As a teacher she has experience with what often happens on excursions and outings organised by the school – learning may occur, but I think she questions its long-term learning effect. She also says that healthy food and physical activity are some of the things that make the project valuable, because she sees the lack of this as a negative development in youth.

3.1.1.3. Goals and principles

So what are her goals? What is she looking for in the pupils and what drives her forward? The following may illustrate this:

“It is like the pupils think they ought to think [that] being on the farm is silly, getting dirty and such, but their eyes radiate when they are here. And they utter lots of funny comments – especially – and this is what I am looking for – the golden moments when

they say: ‘Oh! That’s how [it is]!’ That’s when I know they have understood how things are connected.”

She notices from the looks and the body language of the pupils that they are enjoying the time on the farm. But this is not what is most important; she waits for the exclamations and the “aha’s” – when these exclamations arrive she knows that her message has gone through to them. Another example of this can also be illustrated by the following extract:

“And then, only after we have spoken about the actions of getting the eggs from the chicken coup and make pancakes and take the food scraps back to the chickens and put the manure back in the garden and bring vegetables back [in to the house] and the vegetable peal to the pigs – then suddenly [I hear]: ‘Oh! Aha! Hahaha...’ – and that is what I am looking for.”

This tells me that it is not only enough to *do* – one must also *talk* about and reflect on what has been done on the farm – in order for the pupils to reach a higher level of understanding, an understanding of the connections in nature. In the above passage, she repeats that she is looking for the “aha”, or the “oh!” from the pupils. The wholeness of the actions performed characterizes the activities on the farm, and:

“[...] [E]ssentially, it is about understanding where the food comes from: respect – that is – one of the main goals is knowledge of, and respect for the ecosystem functions that support our life [on earth].”

Her goal is fundamentally bigger than a mere school project that gives pupils a break from the classroom for a week or a week that may have positive social impacts. Her goal is to create a fundamental understanding of the connections in nature, and hopes this will create respect for the ecosystem functions, too. I will later discuss in more detail whether knowledge can lead to more responsible behaviour and whether respect for ecosystem services (“how things in nature works”) can yield responsible actions. The following quote may provide a deeper understanding of her holistic teaching:

“That food comes from the farm is something they discover after a while [on the farm], when they fetch the milk and pick the eggs and stuff. But where does the coffee and the tea and the cocoa come from? I then try to give them an idea, in short, of [the history of] imperialism. That is, Columbus to America. The Slave trade. Everything. [...] But really, to get the pupils to remember... it is the same as in the classroom. We

show pictures, we talk about it, we take notes, we show film! [...] Then I ask them – do you remember the [e.g.] Haitian revolution? It just does not stay with them – it is like they never [learnt it] – it is so far away [for them]!”

The above paragraph shows that the farmer experiences that despite her best effort, topics are forgotten about. I think this illustrates her attempt to give them an overview of the “big picture” of food systems, how the ability to drink a cup of warm chocolate in Norway depends on the workers in Nicaragua as well as the soil conditions. And she observes that the pupils see the connections that are immediately in front of them on the farm, eventually, but struggle more with the broader connections that she also teaches, after passing of some time.

3.1.1.4. Summary of the farmer’s principles and goals

The farmer wants to provide opportunities for the pupils to learn skills that they can master, adjusted for skill level. Most of all she wants to create understanding of how things in nature are connected and hopes, through this, to create a respect for what supports us. Her food system view takes a large and overarching view, much in line with agroecological thinking (Gliessman 2007). According to her descriptions of farm activities, it is a comprehensive and all-encompassing experience that is offered to the pupils in the lower secondary school. In other words, pupils are experiencing and learning about the farming system, which is a subset of the food system. The question is – does it stay with them and does it have societal implications in terms of e.g. responsible consumerism?

3.1.2. Results and interpretation Research question 1b)

3.1.2.1. How do the former pupils understand food systems?

The interview participants have been divided into two parts; the four interview participants that have had nothing to do with Ryeland Farm after they left lower secondary school, and the two interview participants that have been involved with Ryeland Farm after graduating. The reason for separating these into two groups is the possibility that recent connection to farming systems makes for more accurate or deeper understanding of how food systems work.

I have kept the quotations close to the spoken language, in order to keep close to the interview. Some places the interviewee was unsure of things. I want the text to reflect how these are young people with a particular way of talking. They are not always adamant about the topics we spoke about. Some places the memory of an event is deeply detailed and sometimes I had to wait longer for them to find their words. There is a fine line between readability of the text and keeping close to it.

3.1.2.2 Views of the interview participant with no post involvement with Ryeland farm

3.1.2.2.1 Domestic food production and international trade.

Food systems have previously been explained as encompassing all aspects of food production, distribution and consumption. In line with this, I have attempted to identify what knowledge of the food system the interview participants possess.

I will start with Signe, who did not grow up on a farm and is now a student at the university. I asked her about food production in Norway – should we be doing it as a high-cost country, or should we simply import food? The question was meant to be slightly provocative as I anticipated this might give a more interesting answer.

“Of course, it is a very easy solution to import the food! (...) However, the food will become more expensive. They claim that it [food] will get a lot cheaper because it is cheaper to grow it there [abroad] but there is something... there is freight and there is customs and a lot of those things – in the end I think it is better to get it from home! We will know – we always know what is in the different things that we grow, and both grains, vegetables, everything from animals and milk and those things – (...) we will know there isn’t any nonsense (‘tull’). I don’t think they know what is stuffed into [these items]! Of course they may say they do, but I don’t think they do. So in the end, I think it is better that we deal with this at home. Also, we can save the environment by

reducing shipping; it is unnecessary to shop things from Africa when we can take if from [her home town].”

It is not clear who *they* are, however it is likely to be those who advocate in favour of more food imports and less regulations. This seems to be something she has heard from somewhere, that this is an argument for importing more food from abroad. Her objections to this are in economic terms; the cost of freight and customs, as well as in food security terms; we might not know how imported food has been produced. What may be a threat is not clearly identified, but put under the term “nonsense”. It is likely that she means pesticides, hormones, fungicides etc. and other additives that are used in industrial food production. She suggests that *they* do not know everything about the food, even if they think they do. It is therefore better to grow our own food – and it is implied that when we do, we have more and better control of the inputs in to the food. She also has knowledge of the negative environmental aspects of shipping, but does not explicitly mention CO₂ emissions or climate change, though this may be her underlying concern.

Sebastian says that he thinks domestic food production “is very important” and continues:

“It is of grave concern that Norway has removed the national grain storages, (...) in case of emergency Norway expects to buy [grain] from other countries. However, if there is a crisis [grain shortage] abroad too, those countries will prioritise their own inhabitants. (...) So it is a shame that Norway is not more self-sufficient, we are about 40% self-sufficient. That’s not very much.”

He was asked if he thought increasing the duty customs on imported goods was a good idea:

“No, not really. It goes both ways – if states become more protectionist (...) the world trade will decrease and there will be more unemployment – that will [negatively] affect Norwegian farmers. This is clear. But – I guess there are many opinions about this.”

From these two quotations I infer that Sebastian has a good grasp of terms relating to the food system and a good awareness of current events. This is illustrated by his knowledge of the grain storage and that he could tell me the percentage of self-sufficiency of Norway. He does not only give “primary” information, but he reflects upon it and gives a clear personal stance. He thinks it is important not to allow for a reduction in international trade, and he connects world trade with unemployment rate in Norway. At this point I, as the interviewer, could have

asked him to elaborate on how he makes this connection. However, it does tell me that he has an impression of the “big picture” – a food system that is interconnected where one development or domestic policy can affect other parts in the system.

Ingeborg, too, has similar sentiments towards domestic production but adds a different perspective:

“I feel that there has become more unrest or turmoil in the world these days, both in Europe and in Asia – areas that we may get meat and other goods from. If we are suddenly left... that we are unable to get food from those areas – where shall we get our food from if we have closed down all our farms?”

She is concerned over the decline in farm numbers that has taken place over the years, and still is happening in Norway, but also in other countries like the USA. With the occurrence of global conflicts she anticipates an import environment that can become more strained. This perspective is touching upon food security and the ability to feed the country. This ability can be challenged if farms are closed down and international food trade is challenged. This connects self-sufficiency with global food markets and unforeseen circumstances. In other words; a recognition of how different factors are related in a food system.

“(...) there may be solar flares that can completely inhibit flight traffic and they don't know how long it may last (...). And if that happens, [food] has to be transported by boat – (...) really, you are not getting any fresh meat if you are to transport it from Africa to Norway by boat! And – if there are economic catastrophes a country can perhaps not afford to sell the food but have to use it [for their own population]. And also there is a food shortage in the world...”

She is concerned that natural events out of our control may disrupt global trade, in this case transportation. Another aspect she brings up is the freshness of food products. All these are topical concerns that show knowledge of the globalisation of the food system.

Eyvind, on the other hand, answers me with a question when I ask him what the point of domestic food production is when we can import: “But the question is – is it just as good?”, thus raising the question of food quality and food security in domestic food versus “food from abroad”. He continues:

“I am thinking that the meat that is in a MacDonald’s burger – that was a cow two years ago, right. And it is not just a cow, but a lot of flour and those kinds of things. And that is just silly.”

With this, whether accurate or not, he shows a distrust in the current food system. This is also the only thing he mentions regarding food systems or the big picture.

To sum up; topics that come up are related to food security where Norwegian food is given a more beneficial status than imported goods. This may be an issue of familiarity and is also in line with the idea that Norway is a very environmentally clean or pristine country. Another concern that has risen is the decline in numbers of farms. I will discuss these issues further in the discussion section.

3.1.2.2.2 Price levels on food – too expensive or too cheap?

An indication of an accurate understanding of the food system is how price levels are viewed. This is because price of food is a topic that engages many people, especially in Norway. Norway has some of the world’s lowest food prices if adjusted for income but the general view is often the opposite; that food prices in Norway are amongst the highest in the world (Løkeland-Stai & Lie 2012).

Sebastian is aware of this contradiction and says that

“(…) food in general – I mean – it is expensive in one sense, but if you view it in light of how much we earn it is not expensive”

Signe was not aware of this distinction up front, and complains about the price of fish. But when I inform her about price levels adjusted for income she immediately concurs and says:

“Well, that makes it OK, actually, and it is an eye opener. OK, I shall not complain [about food prices]!”

Ingeborg says:

“(…) I can understand how people can think it is expensive here. When you go to Sweden you get five steaks at the price of one in Norway. And I understand that people can think that that’s a lot. On the other hand, one has to earn money on the ‘other side’, too. And Norway is one of the countries where people earn the most money. And we have one of the lowest levels of unemployment. I think it is only right that we leave our money somewhere...”

She recognizes that people can think food is expensive, but puts food price level in relation with income. She is herself from a family that used to be on ‘the other side’, that is, they used to be producers, but her family has now chosen to stop farming.

In the interview with Eyvind, the conversation took a different direction:

The interviewer: Do you find food in Norway to be expensive?

Eyvind: Compared with other countries, yes.

The interviewer: What about in relation to what you earn, your income?

Eyvind: Yes, exactly – that is the crux of the matter, really. Prices compared with other countries. And all the other goods. But it is not very expensive! (...) it is only... one has been to Sweden. And that’s...

At first, I thought he understood the point about food prices being adjusted to income but, looking more closely, I see that he did not quite understand what I meant as he continues with ‘prices compared with other countries’, which becomes inaccurate; it is not the price that should be compared, it is what you get for the money you have available. He compares food prices directly with those in Sweden, and as mentioned by another interview participant (Ingeborg) the price of steak (e.g.) in Sweden is in terms of the real value cheaper than buying it in Norway.

These were the answers of the former pupils that have had no involvement with the farm since they left lower secondary school. I will now continue with the two who have had something to do with the farm afterwards. However, as illustrated above, the understanding of food systems is generally high with a good level of understanding the connections in the global food system.

3.1.2.3 Views of the participants with post-involvement of Ryeland Farm

3.1.2.3.1 Domestic food production and international trade – recent connection with food systems

Kristine thinks that

“When we have the opportunity to produce food on our own land I think it is more just to do so rather than using others’ land to produce food for us.”

She will only accept that food is imported if it means that

“(…) [T]hey can get a job and we buy food from them and they get money for [the food] and they have enough food for themselves – instead of producing food in low-intensity mountainous areas in Norway.

“They” are in this case farmers in food-exporting countries. This is the first time the aspect of fairness has come up. I see two types of fairness in this, the first one is a matter of ‘if we can produce we should produce’ - instead of getting someone else to do it – and because we have the climate and the resources to do it that otherwise would be wasted. The second aspect of fair-mindedness she brings forth is the matter of doing something that can contribute to others’ well-being or improvement of livelihood.

Edvard, on the other hand, includes another perspective for this topic:

“Self-sufficiency is, in my view, and from a climate perspective, to be preferred. But we have to acknowledge that some foods have to be produced other places, especially if we are to get enough vitamin-C in the winter”

And

“[I know people] who think it would be better for developing countries if they could produce food [for us] and that it would be better for the planet as the conditions are better. But I think that if [we] cannot make [our] own food here up in the north, then we cannot live here.”

In this latter statement, it can be read as if it is a country’s duty to produce food for its own inhabitants. These two aspects – the climate perspective and the duty aspect, have not been mentioned by the others, except for Kristine, who in the first quotation says that when you can produce food you should produce food. Edvard takes this one step further; a society which cannot feed itself fully or at least partially must relocate. There is a strong aspect of righteousness in this; we have to produce food because it is the right thing to do.

What characterises the responses of the latter two respondents are that they talk about values, and what the right thing to do is, whereas the first four were concerned about issues on a lower analytical level, specifically food security and food quality.

3.1.2.3.2 Price levels on food – too expensive or too cheap?

On the topic of whether food is too expensive or not, Kristine says

“No. No, I don’t think so. Not in relation to how much money we have! (...) I get a little exasperated when I read tabloid newspapers that write that Norway has the most expensive food in all of Europe – to which they completely miss the point of how much money we earn compared to the rest of Europe.”

This is in line with the other interview participants’ view. Furthermore, she expresses frustration when others miss this point, which means she wishes more people would understand that food in Norway is not as expensive as the general debate expresses when we adjust for income.

Edvard has a more far-reaching view:

“I think food is too cheap. Especially vegetables and the like. I mean – meat is quite expensive in Norway, but that is how it should be. Meat should be more expensive, and vegetables too – but it is difficult [to explain]. I mean – the farmers aren’t making any money. (...) We are using a lot of money to subsidise the farmers when all we would have to do is to allow them a higher salary for what they produce. It is clear; the food is way too cheap.”

Meat should in other words be priced higher so that the food producer can receive a higher income. There is an additional aspect in this regard which is the greenhouse gas emissions associated with meat production, in particular beef, and it is likely that Edvard is talking about an economic disincentive to buy meat. Chicken and pork production are also connected to adverse environmental impacts that are not taken into account in the current pricing system. I will discuss this topic further in the discussion section.

To sum up research question 1b) all former participants on the farm show signs of understanding connections in the current food system (‘how things are connected’). Within this group, the two that have been involved with the farm more recently, directly or indirectly, have a slightly deeper understanding and one even poses suggestions for change. It is not within the scope of this paper to say that the reason for any of the participants’ knowledge is the farm experience, neither to explain the differences within the interview population. However, this suggests that they do understand important connections in the food systems, and in this regard are in correspondence with the farmer’s hopes and principles. It may also suggest that a deeper understanding of the food systems may occur with more interaction with the farming system.

3.2. Results and interpretation research question 2

3.2.1 Which stories are told from the farm, and which aspects of the farm experience are important to the former pupils?

In order to narrow down this research question, I have focused on the quotations in the interview that I coded with emotions, either positive or negative memories, as well as the quotations that I, in my coding, have interpreted as an analytical insight; either regarding their own personal reactions that they remember from the farm, or what they see as the goal of the farm stay. I will attempt to highlight a few stories and identify patterns that can tell which aspects the former participants deem important.

Why are the stories they tell from the farm important? The stories can show which memories they view as important to tell me as a researcher. I am interested in looking at which aspects of the farm experience *they* consider to be important.

After studying the interview material, the following topics are repeated: The social aspect and effects of the farm, the meals, the farmer, the animals, the farm's standards, getting through challenges and practical work.

3.2.2 What stands out?

In order to give an overview of the topics, the following aspects were repeated by the interview participants: Kristine brings up the social aspect, working with animals, the experience itself and how it changed her opinion on organic farming. Edvard highlights the practical work, memories of the farmer and the farm's standard, and working with animals. Signe highlights the farm's standard, and how they had to deal with "challenges" (manure, rain), and animals. Sebastian did not see the "big picture", but has ample reflections of the farmer, working with the animals and being outside. Ingeborg was occupied with the cleanliness or the farm standard, the animals and the meals. Eyvind brings up the farmer, the meals and the slaughter experience.

In this section, I have also chosen to include their reflections about the goals of the farm experience. I think this is very important to include as it tells us how they perceive the whole experience.

3.2.3 The social aspect and effects of the farm

Signe said:

“Our class consisted of a lot of different people (...). When we were at the farm, we just... we cannot continue to bitch and banter at one another because [if we do] we will not get anywhere, we will not manage to complete [our tasks], we want to be done.’ And when we came back to school, everything was back to ‘normal’.”

She recognises that if they kept up the habits that had been formed in the school setting, they would not be able to complete their tasks, and they learnt to cooperate with each other. However, as she also notes, things went back to ‘normal’ and they probably went back to old habits. But it shows how bringing the children out of the classroom may influence them to create different constellations or, simply, it is a factor of realising that in life “outside of school” you sometimes have to cooperate with people you do not know or do not get along with well.

Kristine said:

“(...) [I]t was nice to be at the farm. It unifies the pupils. We get to meet each other on other arenas – experience each other – experience that we can do other things [together] than read.”

The key aspect that develops is the unification of the class. They see each other in other settings. The farm offers many different tasks that are done in groups so the whole class is not together except during lunch and at the end of the day, and paradoxically it may be this separation that makes them more unified.

3.2.4 The meals

One of the participants, Eyvind, tells me he was given food he had not tasted before:

“I remember people were hungry. And also sceptical. There was a (...) strange balance: you are really hungry and then you are being served something you haven’t seen before. But you choose to eat it as that’s what you’ve got.”

This is not portrayed as something negative but stated matter-of-factly that you eat what you are served; the option of going hungry is worse than trying a new or unknown dish.

Ingeborg said this:

“When people share a meal together, you kind of start off on the sympathetic side with each other. I was bullied a bit in primary school [sic!], and it wasn’t always easy. But when we suddenly were sitting by a table and ate good food and stuff – we became happy, the atmosphere improved. [We] talked about other things than we used to do in school, and the energy was also completely different.”

I think both these statements show that out of school, in a situation where they have been outside, working together with each other and in different groups, they get tired and hungry. The setting changes compared to when at school and so do the social constellations and how they treat each other. Ingeborg’s experience at the table shows how the farm can play an important role for pupils that are not always happy at school. In Ingeborg’s case she implies that the bullying had stopped by lower secondary school, but the atmosphere between the conflicting parties may still be uneasy. The meal works reconciliatory on social conflicts. This aspect is potentially important for other pupils that experience a hard time at school.

3.2.5 About the farmer

One of the former pupils, Sebastian, was under the impression that the farmer wanted some extra helping hands on the farm:

“She was a nice lady. Just a little strict. (...) Some of us did feel, however, that we were ‘free labour’ for her on her farm. We were... maybe 18 classes that during the course of the year were on her farm, so it is clear to me; we did a lot of work for her. (...) We didn’t always feel that it was appreciated. The goal of the municipality was for us to learn traditional agriculture. I think the farmer’s goal was ‘free labour’.”

This is an interesting view, and indicates that the goal of the farm experience is not fully understood (or: understood differently) in relation to the farmer’s goal, which is that through the practical experience of the farming system, pupils will acquire knowledge and respect for the ecological foundations of the earth.

Another one, Eyvind, puts it this way:

“The farmer! Yes, I got very well along with her. I remember – you were not very interested in being on her ‘wrong side’. She was a very strict lady, but if she liked you she was pretty good [nice], actually. The only thing you had to do [for her to like you] was to do as you were told instead of just hanging out, skipping your chore.”

Edvard, which has been back on the farm during recent years, said that:

“To some pupils, the farmer may come across as stressed and ‘unpolished’. When I was there as a pupil, she did not have much time for me, so I think I learnt most things from experiencing the farm.”

He learnt most things through experience and less from what the teacher said when he was there. He seems to not remember the classroom sessions they had on the farm; instead, he remembers that the farmer was busy. It is important to keep in mind that this is said from a ‘post-perspective’ – he has been back on the farm and worked there after finishing his lower secondary school. This may also be an explanation to what seems contradictory at first but, seen in light of his work experience on the farm, makes more sense:

“Well, she tells these political anecdotes as we work, so quite definitely she is one of those who have been significant in making me the person I am today.”

This shows the potential impact a person who works close to youth can have and may form an important aspect of the farm experience.

3.2.6 The animals

Edvard says that

“Being on the farm was fun. The fact that there were animals made it very fun. I could have fun for a long time with the animals.”

Signe says

“I remember it very well. We were told that when we were coming back the next time, there would be calves. So, in the autumn of 9th grade, we harvested what we had sown in the spring, and we went to see the calves in their little enclosure where they were walking halfway on their tip-toes – they were still a little clumsy. Kittens had also been

born and they were in the same enclosure. So we just... went in there every morning and just: 'oh, so cute'”

This is one of the memories that is described in great detail, which suggests it is still a vivid memory to her – she remembers the animals particularly well.

They also experienced butchering a calf; this is mentioned by all the interview participants. It clearly was an experience that made an impression, but Sebastian’s view is common among them:

“Well, it is a part of life – that’s how you get food. That animal [the calf] was never abused or anything like that, and he was killed in a humane way. So I did not have any issues with the slaughtering. Some of the girls did, though. Of course it is an intense sight. It was kicking, you know. But – it is a part of life.”

He recognises that not everybody liked the event, but takes a pragmatic stance towards it: as long as the calf lived a good life and the killing happened in a decent manner, it was OK. It is a part of life and humans need to eat.

3.2.7 Getting through challenges

A reoccurring theme in the interviews is that during the farm stays over the three years they learnt to overcome challenges. The slaughtering of a calf is put forward as something not very pleasant, but something that they had to get through:

“I couldn’t deal with it when they shot the bullet through it. That was too much. (...) But – there was something about it – we were responsible for it afterwards, had to cut it all and make ground meat, and those kinds of things. (...) That was weird! (...) Seeing the calf walk around one day and lay on your dinner table the next – that was a bit... (...) At the same time – it was more than OK to get to open it and see what was inside and see what [parts of the calf] could be used for what – we more or less did use all of the calf.”

Ingeborg, which grew up on a farm, had to deal with her reaction to a different management system at the farm than what she was used to from home. Keeping in mind that the farm is a family farm with few ‘modern’ facilities and the use of more traditional techniques in animal husbandry like ‘talle’ – deep litter method that some industrial farms do not practice anymore – she said:

“You get to a place where things are done differently [than what you are used to]. I became a bit like – no – that’s wrong and... (...) well, there aren’t really a right and a wrong way to do things in agriculture – but at that time I felt it was wrong. (...) But in the end – it was ok.”

3.2.8 Influential farm stay

As a closing statement in this section, I will let Eyvind speak:

“(...) It is a little like having been in the national service. (...) When you have left the national service – it is like – it changes people – they learn how to keep tidy and this and that – things that are necessary to get by in daily life, really. Not that you get the same values from being at the farm as you get in the national service, but it has the same effect on people. (...) Your view on things changes.”

Later on in the interview he expands on this:

“Before you have been there, you think that food production is like a robot – a robot and maybe a cow in the beginning of the food chain. But here... you get a completely... this is what farming is. What I mean is – having experienced it – seeing how it [farming] really should be done (...) gives you a different view on things that are beneficial in your future. No matter where you are going or where you live. It is difficult [for me] to say why I mean this – but I just think that, in general, it is a healthy experience.”

4. Discussion

The former pupils that participated on Ryeland farm seem to have some grasp of the connections in the food systems. Neither of them, however, talks about food access or democracy issues. In most industrialized countries, less than 5 % of the population produce food. Still, however, there is a relatively stable food supply (Francis et al. 2005). The interview participants are born between 1986 and 1991, at which time Norway had seen an increase in wealth since the end of the Second World War. These young adults belong to a society that has not experienced food shortages or problems accessing food. The global food system in which they have grown up is likened with a vending machine; it provides an unprecedented choice – any food, anytime, anywhere” (Halweil 2002 in Francis et al. 2005). At the same time, there is some suggestion in my study that *where* the food is from is of importance for these young adults. The ones who say they do not think about buying organic or local food in particular (or one of these options) say that they try to buy food produced in Norway.

There is little mention or expressed worry about the state of the global food system amongst the interview participants. One person mentions climate aspects directly (Edvard) and another says that we ought to produce if we can (Kristine). Fossil fuels are not mentioned as a topic at all. Given that fossil fuels drive large parts of the global food systems (the Norwegian food system is no exception) in the form of gasoline-dependent farm machinery, the mining, processing and transportation of minerals as fertilizers (organic and conventional systems) and the manufacturing of pesticide (conventional systems) (Jacobsen & Lien 2007; Kirschenmann 2008) this is surprising.

Most of the former pupils seem unaware of the environmental consequences of the industrial food system, which makes them similar to the majority of people (Francis et al. 2005). Few of the participants in this study spoke about changing the current food system, or indeed, that there is a need for change. The two who did, Edvard and Kristine, have both been involved with Ryeland Farm as young adults. This implies that Anne’s goal of seeing the connections of food systems and linking it with moral values only resonates in the two who have additional experience. This may be by chance, but an influential factor may be the time frame; one week each year for three years. Additionally, there is a large number of factors that can influence a person’s opinions and values (Kollmuss & Agyeman 2002). There is some indication that these ‘other factors’ are stronger with regards to Signe, Eyvind, Ingeborg and Sebastian, than for Edvard and Kristine.

Food quality is something that concerns Sebastian and Eyvind, more than the environmental impacts of its production. This corresponds with 63 % of other Norwegians who, in a survey by Torjusen et al (2001 in Francis et al. 2005), considered “availability of high quality food” very important when they make their purchases.

Most of the interview participants protested when I asked if food is too expensive. A few were a bit unsure whether or not they actually saw it that way or not. According to Løkeland-Stai and Lie (2012) Norwegians spent 24 % of the total household budget on food and non-alcoholic beverages in 1970. For one week’s worth of food, Norwegians had to work for 4 hours and 30 minutes. In 2010, household budget share going to food and non-alcoholic beverages had decreased to less than 12 %, and the required work time was 1 hour and 46 minutes for a week’s supply of food (p. 51). Yet, it is common for Norwegians to complain about food prices, it is a regular front-page theme in tabloid newspapers and going shopping in the Swedish border towns is common (Døving 2003). This topic may or may not have been mentioned on the farm. Additionally, the farm experience is in the past, and knowledge does not always remain. However, it could be anticipated that a holistic understanding of the food system is connected with an accurate view of food price mechanisms. On the other side, all but one of the interview participants are students, a low income situation that may influence the view on food prices.

Shared between all the interview participants in this study was that they did not mention terms and phrases that are part of the farming ecosystem, such as ‘soil’, and ‘soil-fertility’, ‘weed’, ‘pest-management’, ‘resources’, ‘diversity’, name of particular plants (spruce tree tea and nettle was mentioned) and different farming methods. It is not possible to infer from this that they do not know them – but it may suggest that such concrete words and descriptions were not considered important for them to mention, or that I was not interested in these small details.

Francis et al. (2005) highlight education “as the best hope for people to learn about ecosystem services and the need to understand where and how food is produced, how this impacts the ecosystem [...]” (Francis et al. 2005, p. 67). This is a recommendable hope, but my research indicates that this may not be enough. A fairly comprehensive (albeit short) experience with the farming system as part of the regular school system could represent one such educational programme. So why it is that knowledge of and experience from ecological systems do not immediately seem to create citizens who select food items that do not reflect their knowledge

of connections? Most of the students in my study were not familiar with shopping at a Farmer's Market, or buying local or organic food regularly. One possible explanation for this can be found in environmental research on pro-environmental behaviour. In the early 1970s, linear models that attempted to show the links between environmental knowledge, environmental attitude and pro-environmental behaviour were developed:



Figure 1. Early models of pro-environmental behaviour. In Kollmuss and Agyeman (2002).

Despite this model's appeal to many campaigning organisations (Kollmuss & Agyeman 2002), there are much more complex mechanisms driving our behaviour. Kollmuss and Agyeman (2002) assemble the following factors that may be influencing pro-environmental behaviour:

<u>Factors influencing pro-environmental behaviour</u>	<u>Sub-factors influencing pro-environmental behaviour</u>
Demographic factors	Gender
	Length of education
External factors:	Institutional
	Economic
	Social
	Cultural
Internal factors:	Motivation
	Pro-environmental knowledge
	Awareness
	Values
	Attitudes
	Emotions
	Locus of control
	Responsibilities
	Priorities

Table 2. Factors influencing pro-environmental behaviour. Inspired by Kollmuss and Agyeman (2002).

A limitation of this study is that it does not address the issues described by Kollmuss and Agyeman in great detail. However, the main goal in this research was to delve into the students' experience of the farming systems as pupils and investigate their retrospective attitudes, memories and stories from the farming experience – factors that could be described as the 'small picture' – and attempt to relate it to their understanding of the 'big picture'; the global food system.

5. Further research

One aspect of the farming experience at Ryeland Farm has yet to be mentioned: The pupils experience this farm with all their senses. My interview participants in general showed a positive attitude towards the experience. But this is but one part of the farming system; the number of family farms have decreased (Løkeland-Stai & Lie 2012) in later years, and most people do not visit industrial dairy farms, pig facilities, let alone chicken production complexes. One question that arises in this respect is whether *such* experience with the

farming system would have had an impact on knowledge of food systems and of food systems behaviour in either direction. It would be interesting to see a similar study carried out where the respondents have experienced small farms in a comprehensive way (such as the Ryeland Farm and the secondary school project) *and* its industrialised counterparts.

If I were to delve into this topic again, I would keep a deeper focus on the factors discussed by Kollmuss and Agyeman. There could also be a further investigation of the links they make of the ‘small picture’ – their farming experience – and the ‘big picture’ – what they tell me about the general food production, distribution and consumption. It is possible to combine this interview material with a second round of data collection using survey as a method. This will yield more statistically generalizable results, which can supplement a more analytically generalizable study like this (Yin 2009).

6. Conclusions

The farmer has a holistic approach to the food system, with a wish for the pupils to see the connections between the ‘small picture’ and the ‘big picture’. She wants to help develop characteristics that are difficult to discover in the classroom. The interview participants see some connections in the food system, particularly within economics and trade. However, as manifested by the little importance given to food choices and alternative purchasing channels, they do not see themselves as influential actors within the food system.

The social aspects, the importance of the animals, the importance of the meals and the influential force of the farmer are all stories that are told, and are as such given meaning. The aspects of practical work and getting through challenges are less often mentioned and the connections between the farm (the small picture) and the global food system (the big picture) are stories that are untold. This indicates that for the majority of the interview participants, it is difficult for them to see this connection.

In conclusion, it must be mentioned that it is not possible to create direct links between the farming experience and the food systems behaviour in these young adults. The farm experience is also far away in time. However, as one of my respondents (Eyvind) said: “It is kind of like the national service – you don’t know what it does to you but it changes you fundamentally.” Given all the factors that may influence a person to develop pro-environmental behaviour or food systems behaviour, a deep and comprehensive farming

experience is one step in the right direction. As farmer Anne at Ryeland Farm says: “Every school should have its own farm”.

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APPENDIX I

Intervjuguide NSD Ellen Marie Winthers masteroppgave Agroøkologi, UMB 2012-2013

(Norsk/Norwegian)

Ønske velkommen. Fortelle litt om meg selv.

1. Hva har du gjort etter du ble ferdig på ungdomsskolen? (kan du fortelle meg om studier og/eller jobber, og hva du liker å gjøre ellers (hobbyer). Hva holder du på med for øyeblikket? (livssituasjon)
2. Har du tenkt på gården siden du ble ferdig på ungdomsskolen
3. Hva husker du fra oppholdene på gården?
4. Er det noe du husker ekstra godt eller som du syntes var ekstra viktig?
5. Hvordan likte du oppholdene (og arbeidet) på Hegli?
6. Hvordan var maten på gården? Har maten på gården påvirket hva du spiser?
7. Satt du pris på å sitte rundt bordet med medelevene og spise et varmt måltid?
8. *Har du hatt bruk for noe av det du lærte på Hegli i ettertid? (i så fall, hva, og i hvilke sammenhenger har du hatt bruk for dem)*
9. *(Når du husker tilbake, kommer du på noe spesielt som du lærte fra Anne eller andre voksne?)*
10. *Har du hatt fordeler av noe du gjorde den gangen?*
11. Hva tror du, når vi snakker om det i dag, var intensjonen med å være på Hegli gjennom ungdomsskolen? Hva var Sidsels intensjon? Skolens? (Sammenfaller de eller er de forskjellige? Var det slik du tenkte da du gikk på ungdomsskolen også?)
12. Har du vært tilbake på Hegli etter ungdomsskolen?
13. Har gården hatt noe å si for hva du gjør i fritiden din? (både ute og inne, f.eks hugge ved, fyre opp i peisen/bål, hagearbeid/blomster/urter/grønnsaker/bærplukking, matlaging, håndarbeid/tradisjoner)
14. Tenker du noen ganger på erfaringene fra gården når du handler mat? (f.eks egg? Kjøtt?)
15. Hva tenker du om lokalprodusert mat? (Kjøper du noe? I så fall, hvor? Og hvorfor/hvorfor ikke?)
16. Hva tenker du om økologisk mat? (Kjøper du noe? I så fall, hvorfor/hvorfor ikke?)
17. Hva tenker du om Norge som matprodusent? Hva mener du om toll på importvarer? Er det for mange eller for få bønder i dag? Bør Norge produsere mat i det hele tatt? Hva menes med jordvern? Synes du maten du kjøper i butikken er for dyr eller for billig?
18. Kunne du tenke deg å ha en hage en gang i fremtiden? (Har du tilgang på en i dag?) Hva med dyr?
19. Har du opplevd at du har kunnskap om (eller kjennskap til) matproduksjon og gårdsarbeid som venner og bekjente ikke har (som ikke har erfaring fra gård)?

APPENDIX II

Forespørsel om deltakelse på intervju i forbindelse med masteroppgave ved Universitet for miljø- og biovitenskap (UMB)

Jeg er masterstudent i agroøkologi ved UMB på Ås. Jeg skriver nå den avsluttende masteroppgaven som skal leveres i mai. Temaet for oppgaven min er gård-skolesamarbeid. I den forbindelse ønsker jeg å intervju deg om dine opplevelser på Hegli gård gjennom ungdomsskoletiden. Jeg ønsker å se nærmere på hvilke erfaringer man sitter igjen med når det har gått en tid siden man var på gården, og hvilke tanker du gjør deg om mat og matpolitikk i dag.

For å finne ut av dette, vil jeg intervju deg og fem andre som deltok på Hegli i tidsrommet 1999-2004. Spørsmålene vil dreie seg om dine interesser, om mat; matproduksjon og matpolitikk, og om dine perspektiver om fremtiden. Jeg vil også spørre deg hva du i grove trekk har gjort siden ungdomskolen. Det ville vært fint om du i forkant tenker litt over hva du husker fra ukene på Hegli. Intervjuet vil ta ca. en time. Tid og sted avtaler vi nærmere.

Informasjonen fra intervjuet vil kun bli brukt til min masteroppgave, og alle opplysninger om deg vil bli anonymisert. Ingen enkeltpersoner vil kunne gjenkjennes i oppgaven. Under intervjuet vil jeg ta notater, i tillegg til at intervjuet vil bli tatt opp på bånd. Dette vil bli slettet når oppgaven er ferdig og sensur er satt. (Senest september 2012).

Det er frivillig å delta i intervjuet, og du kan når som helst trekke deg uten å oppgi grunn. Da vil jeg slette all data om deg umiddelbart.

Dersom dette er noe du kunne tenkt deg, er det fint om du skriver under på den vedlagte samtykkeerklæringen, og sender den tilbake til meg i vedlagte ferdigfrankerte konvolutt.

Denne studien er meldt inn til Personvernombudet for forskning, Norsk samfunnsvitenskapelige datasentral A/S med prosjektnummer 29474.

Skulle du lure på noe i forbindelse med denne forespørselen eller oppgaven min, kan du kontakte meg på tlf: 415 111 58 eller på e-post: ellen.marie.winther@student.umb.no. Du kan også kontakte min veileder, Linda Jolly, tlf: 48 29 43 47, e-post: linda.jolly@umb.no, ved seksjon for læring og lærerutdanning (SLL) ved UMB.

Med vennlig hilsen,

Ellen Marie Winther

Samtykkeerklæring:

Jeg har mottatt informasjon om studien av gård-skolesamarbeid og nåværende holdninger til mat og matproduksjon. Jeg ønsker å stille til intervju.

Dato.....

Signatur.....

APPENDIX III

The Farmer “Anne” at “Ryeland Farm”

“That farms – and the White Buses¹ are used as alternative learning grounds are not for the sake of the farmer or of the bus company. It is neither for the sake of relieving the school from educational challenges. A farm can give young people the possibility to work, experience their own strengths, apply and expand on knowledge they already possess, and understand how things in life are connected. In other words – acquire basic knowledge.”

- The Farmer on the motivation of cooperating with an upper secondary school

– A presentation of the farm and the cooperation project

I asked the farmer to tell me what the most important message she wants to give the youth when they are on the farm. She answered: “Put simply; it is about understanding where the food comes from. And respect. I mean, one of the main goals is to have knowledge about and respect of the ecological systems that support our existence².”

So what are the activities? The pupils partake in *every* activity that is needed on a farm, with the exception of milking, as they arrive too late in the morning and leave too early in the afternoon as the cows are milked around 7 in the morning and around 4 in the afternoon. The following section is an attempt to list all the activities the farmer mentioned the pupils do.

The pupils are there with the class, most of the times reaching up to thirty students at the time.

Overview of activities done at Ryeland Farm during the course of three seasons and three years; one week at the time (all activities have an adult supervisor, and the pupils are given written instructions before any task).

- Firewood management; chopping/sawing, cutting, sawing, carrying, stacking, and lighting fires
- Animal care: feeding, moving them from barn to field, letting the chickens out in the morning etc
- Cooking; beef, poultry or pork is prepared, as well as berries, fruit and vegetables. At the time of the interview the farm has a high percentage of self-sufficiency, something that has increased over the last few years.

¹ White Buses – a concept of educating pupils in high school of the second world war and in particular the concentration camps. The buses travel from Norway to Poland every year with new pupils.

² «livsgrunnlaget» in Norwegian.

Setting the table in a correct manner. Practice towards the feast undertaken winter of 10th grade.

- All the dishes are done by hand with bicarbonate of soda
- Gardening; maintenance and planting, preparing soil, managing the compost, weeding, harvesting etc.
- Fencing; put up the electrical fences for the cows in the spring, move them in the summer time and remove them in the autumn. Small fences are made using branches of alder.
- Mechanics; repairing machines that need maintenance or repair.
- The workshop barn; carding (with carding comb), spinning, weaving and sowing. They make floor rugs, towels for the kitchen, and have just started making woollen blankets³
- Farmer's booth; every spring and autumn the pupils sell vegetables and other goods from the farm. Entrepreneurial focus, customer management. The pupils discover how much made from a farm is not "fit for sale" (according to different regulations) and discuss around local and global food waste.
- Fire heated pizza oven; pizza baking from scratch in the fire heated pizza oven, bread making that the pupils can bring home,
- Slaughtering; a calf or cow is slaughtered, as well as roosters and lambs. This is the only activity that the pupils do not do themselves, a professional butcher comes and the pupils watch. The butcher shows them the ligaments, muscles and intestines and explains the functions of the parts.
- Carpentry; they have made the chicken coup and the green house, and general maintenance in the garden, for example repairing the raised flower beds, making wheelbarrows
- Rope making; production of artisanal ropes. Focus on re-use of resources of the farm.

³ A few of activities like the arts and crafts sessions in the workshop barn have only developed the last years, implying that my interview objects only participated in a smaller, less developed art and crafts activity whilst they were on the farm.

An example of activities described by the farmer:

“First, I thought: What was done on a farm? What has to be done on a well-functioning farm? They have to go to the forest – we need fire wood. That means they have to go to the forest, and they have to cut the wood by hand with a saw. There has to be a teacher with them, and they are one or two groups, depending on what types of pupils they are. And we have made an outdoor shelter, so perhaps they will make themselves some tea. That’s understandable. I call this the long lines. Then, they either carry the wood, or I have to drive it in the tractor. If I do it, they have to put the wood on the trailer⁴. It is either I or a neighbor that drive the tractor, and we put it up to the farm yard. From there, they have to saw it into [62.5 cm] long logs (...) Perhaps the logs need to be split, at least if we have an adult that can be with them all the time, otherwise we don’t do it. Then the logs are put away to dry. After they have dried long enough the wood is carried to winter storage. When we are lighting a fire in the firewood stove they have to fetch it again. And they get to participate in lighting the fire. I try to teach them how to make a fire – because they always ask for lighter fuel and all kinds of strange things – but I try to teach them how to make fire the simple way – and I also tell the girls they must not dream of marrying a man that cannot light a proper fire!”

Managing firewood:

“This activity starts with the tree still in the ground, and ends with the pupils lighting and managing fire in the fire wood stoves. When they have the feast for the grandparents, the farmer tells me there are four to five fire wood stoves that need to be run at the same time to keep the house warm enough for all the guests and the pupils, in all the rooms.”

Gardening:

“Every group has one flower bed each that is 1 meter and 20 centimeters wide. The first day, they turn the soil. Then they have to carry manure, if they have time left that day. If not, they continue the next. And remove weeds – and hopefully count earth worms! So they can understand the role of the earthworm. And perhaps look at other animals. Even just touching the soil is... And then they either sow [seeds] or plant seedlings. (...) They spend at least three days doing that activity. Some never finish... But we try. And we mix soil for planting, which is another activity. Mix and sieve⁵ soil from the compost with sand and turf and...”

Animal work:

“Taking care of the animals is another activity. The pupils do not participate in the milking of the cows – [because they arrive too late in the morning to catch the milking – and leave too early to catch the afternoon milking]. But they participate in feeding them, prepare the barn for the next milking session, and feed them silage. What I didn’t manage to do yet, but I would like to do – I would need people around me who are used

⁴ Tilhenger – find better word

⁵ Solde – finn på engelsk

to animals, who are feeling secure – I would like them to brush the cows – that is a really nice activity. But they would need to know which cow is able to stand still etc. But they are with the animals, they let the cows out on to the field. And then there are the chickens. And the eggs. And we have two sessions caring for and working with the animals – before and after eating [lunch]. What they think is a fun job is letting out the geese! And in the summer, they get to let the chickens out from the chicken coup, and they watch them fly into the courtyard. They tend to like to do that.”

Fence-making and carpentry and mechanics:

“They make fences (...). They build the electrical fences; the job has to be done in a particular way – and it’s quite a bit of work. And then there is carpentry. If anything brakes, they participate in mending. We have a lot of wheelbarrows that break, and they either mend them or make new ones. And the flower beds, a frame of four meters times one meter and twenty centimeters need renewal. And they make trestles that we use making tables, we need tables for all kinds of stuff, we need tables when we have the vegetables... We made a green house, and they made the chicken coup, and we just made a new door to the goose-house. These things never stop! Put on chains [for the tractor in the winter time], remove chains and mechanics – add oil, fill gas, repair the harvester...”

All this information was given to me in the interview that was performed the winter of 2012.