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## Farming in case of crisis

Farmers' political trust and the social contract for food security in Sweden

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Department of Urban and Rural development  
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# **Farming in case of crisis – farmers’ political trust and the social contract of food security in Sweden**

Jordbruk i kris – lantbrukares politiska förtroende och samhällskontraktet kring livsmedelsberedskap i Sverige.

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## ABSTRACT

This thesis addresses the role of agriculture and Swedish national food security in the event of a crisis in the food chain. The focus is on farmers' political trust and the relationship between farmers and government, mainly regarding crisis management. The main empirical data consists of 20 interviews with farmers in the county of Västra Götaland.

Food security is one of five focus areas in the recently restarted Civil defense planning, which since 2015 is taking place among central authorities in Sweden. The foodstuff preparedness as part of the Civil defense planning is about the access of food for every citizen during a major crisis or war. Food security has been a central part of the welfare state building with a direct state-responsibility. With a perceived reduced threat against Sweden after the Cold War and since Sweden joined the EU and the Common Agricultural Policy, the governmental control of the food supply both in peacetime and as a part of national defense has ended. However, the conditions for farmers in Sweden today are to a high degree controlled and regulated by European and national politics and law. Therefore the trust between farmers and the state becomes central to understand agriculture's role in food security management. The objective of this thesis is to explore the farmers' perspective on their and the state's role and responsibility for food security in case of crisis. The understanding of the relationship of trust between the farmers and the central authorities, namely the *political trust*, is central in this thesis and is analysed with the central concepts of *reciprocity* and as part of a changing *social contract*.

The farmers were interviewed about their attitudes and abilities to maintain food production both in a short and a long term crisis perspective. Farmers are expressing and relating to two common ideals when it comes to what agriculture is and its role in society: the businessman farmer ideal and the lifestyle farmer ideal. Drawing from this, the trust farmers express for the society in general, and specifically for state institutions for agriculture and food security, is analysed. Experiences of agriculture as not appreciated by the rest of society for its role in food production, rather as recreation or landscape management, or only in negative terms, leads to a low feeling of responsibility for society's food supply among the farmers. Political trust is discussed in terms of the importance of a functioning legal system and that the authorities are perceived to be acting with integrity and based on shared values. Farmers show a weakened trust in the central authorities important for agriculture, particularly linked to negative experiences of public law and controls. The authorities are perceived not to share farmers' values. At the same time however, the overall political trust is high among Swedish citizens, including the farmers. In terms of preparedness, the farmers trust that the state somehow will solve a crisis when needed. These two tendencies of political trust both contributes to a "wait and see" approach to crisis prevention, and can be seen as a major challenge for efficient emergency cooperation.

Keywords: Farmers, social contract, political trust, responsibility, food security, cooperation, crisis preparedness, civil defense.

## SAMMANFATTNING

Denna uppsats handlar om lantbrukets roll för livsmedelsförsörjning i händelse av kris utifrån aktiva lantbrukares upplevelser av ansvarsrelationen mellan stat och lantbruk. Den huvudsakliga empirin består i 20 samtalsintervjuer med lantbrukare i Västra Götalands län.

Beredskap inom livsmedelsområdet är ett av fem fokusområden i arbetet med återupptagandet av totalförsvaret som sedan 2015 pågår bland bevakningsansvariga myndigheter. Livsmedel utgör en del av det civila försvaret och handlar om att trygga medborgares tillgång till mat vid kris eller krig. För samhällets livsmedelsförsörjning vid kris har ett statligt ansvarstagande varit en självklar del av välfärdsstatsbygget. I och med en upplevd minskad hotbild mot Sverige efter kalla krigets slut och sedan Sveriges inträde i EU och den gemensamma jordbrukspolitiken har den statliga styrningen för livsmedelsförsörjning såväl i fred som vid kris minskat. Jordbrukares generella villkor och situation i Sverige idag styrs och regleras dock i hög grad av europeisk och nationell politik och lagstiftning. Detta gör att förtroendet mellan lantbrukare och staten blir centralt för förståelsen av lantbrukets roll för livsmedelsberedskap. Syftet med detta arbete är att utforska lantbrukares perspektiv på sin respektive samhällets roll och ansvar för livsmedelsförsörjning i händelse av kris. Förståelsen av förtroenderelationen mellan stat och lantbrukare, det *politiska* förtroendet, är centralt i denna uppsats och analyseras utifrån grad av *reciprocitet* och som en del i ett *samhällskontrakt* i förändring.

Lantbrukarna har intervjuats om sin inställning till och förmåga att upprätthålla matproduktion dels i ett kortare och i ett längre krisperspektiv. Lantbrukare kan sägas ha olika hög grad av antingen företagarinställning eller livsstilsinställning till lantbruket, vilket påverkar hur de resonerar kring sin roll i samhället och ansvar för matproduktion. Vidare analyseras vilken tillit lantbrukare har till statliga institutioner för krisberedskap inom lantbruket. Detta politiska förtroende diskuteras framförallt utifrån betydelsen av ett fungerande rättssystem och att myndigheter upplevs agera legitimt och utifrån gemensamma värderingar. Upplevelser av att lantbruket inte uppskattas av samhället för sin matproducerande roll utan snarare som rekreation eller landskapsvård, alternativt inte alls utan bara i negativa termer, är utbredd. Detta gör att ansvarskänslan för samhällets livsmedelsförsörjning i stort är låg bland dagens lantbrukare. Lantbrukarna ger även uttryck för försvagat förtroende för centrala myndigheter viktiga för lantbruket, framförallt kopplat till negativa erfarenheter av myndighetsutövning och att myndigheter i minskande uppfattning upplevs dela lantbrukarnas värderingar. När det gäller krisberedskap finns dock en utbredd tillit till att samhället på något sätt löser det när det väl gäller. Dessa båda tendenser av politiskt förtroende medverkar båda till en ”vänta och se”-inställning till krisförebyggande åtgärder och kan ses som en stor utmaning för möjligheten till effektiv krissamverkan.

Nyckelord: Lantbrukare, samhällskontrakt, politiskt förtroende, ansvar, livsmedelsförsörjning, samverkan, krisberedskap, civilt försvar.

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## **INTRODUCTION**

Is food security an issue in Sweden? The literature on food security focuses mainly on if and how people in a specific region, country or at household level have “access to sufficient, safe, nutritious food to maintain a healthy and active life”, as defined by The World Food Summit in 1996 (WHO 2016). In present day Sweden this must be seen as achieved for most citizens, but there is at the same time a high uncertainty regarding how the preparedness for food security in case of a larger crisis would affect the food supply chain. Recently a public debate on the role of agriculture and farmers in securing the food supply in Sweden has been raised, most commonly in terms of the growing dependency on imported foodstuff. This debate includes speculations about the amount of the food imported to Sweden and discussions concerning how many days it would take before the grocery stores run out of supplies if the trade and transport system stopped functioning. Regarding the self-sufficiency rate however, the only hard facts we have is that around half of the total monetary expenses for food in Sweden is used to buy imported foodstuffs (LRF 2010). This does not say anything about the actual amount of available food of national origin, only that half the money spent on food in Sweden goes to imported foods.

But why worry? Most Swedes cannot imagine a situation different from today, when you can get any food from almost anywhere in the world in the supermarket seven days a week. However, food security and the role of agriculture is an important political as well as scientific question in many parts of the world, especially in the field of rural development (c.f. Ashley and Maxwell 2001). For long the national food security has been seen as one of the most important security questions, and is still so today in many other western welfare states. Maybe even more important, there is the acute need to solve the big sustainability challenges of our time where food and food production play an important role both for social and ecological sustainability. In other words, understanding how farmers’ view their role and the trust-relations with the rest of society for food security is important both for creating resilient food systems as for human security (c.f. O’Brien, Hayward and Berkes 2009). Farmers’ perspective on food security has not been researched in the context of the foodstuff contingency situation in Sweden today.

## **AIM AND RESEARCH QUESTIONS**

This thesis aims to explore the farmers' perspective on their and society's role and responsibility for food security in case of crisis. Farmers' general view on their role in society as a whole relates to many different actors, e.g. wholesalers, the dairy industry, grain companies or consumers and media; however the main focus here is on the farmer-state trust-relation.

In order to achieve this overarching aim, the work has been guided by the following two research questions:

*How do today's farmers view their role and responsibilities in the society and the food chain?*

*How do today's farmers trust public institutions on emergency preparedness for agriculture and food security?*

## **THESIS DISPOSITION**

To explore these research questions in a clear way, the thesis is organised as follows. I completely agree with the view that no societal phenomenon should be examined without its historical context, therefore the historical background in next chapter has been allowed to be relatively extensive. Thereafter follow the section where I show the theoretical framework guiding the research and analysis, and closely related to this the methods and material used are described and discussed. Before moving on to the results I then include a chapter where I introduce the field of on-farm vulnerabilities. I found this to be important since the farm vulnerabilities and the dependencies the farmers regard as most critical is what the understanding of the farmers' view of their role and responsibilities in society build on. The chapter is drawing mainly on the interviews and is needed as pre-understanding for the results, which follows in the fourth chapter. The result chapter is divided into four subheadings, where the first two are mainly answering the first research question and the last two subheadings focus on the second research question. With the results I throughout the text also discuss the empirical findings in relation to related studies. The concluding chapter then works as an elucidating summary of what I found as most important and interesting in the findings.



## **HISTORICAL BACKGROUND ON THE RESPONSIBILITY FOR FOOD SECURITY**

The role of agriculture in securing the national food supply in a crisis has traditionally been part of the defence policy and not agricultural policy, even though the department of agriculture has handled the (in)stability and conditions of farming in peacetime. Historically, the responsibility and power over different societal functions and infrastructure has been in different hands in different societies. The key issue is what the responsibility of the state versus citizens or private operators should be, i.e. how the social contract is manifested when it comes to food security planning. Exactly what is meant with the social contract, and how it can be understood from a theoretical standpoint, is accounted for in the next chapter. In this chapter follows a brief overview of the conditions and politics of agriculture and food security, today and historically.

The most recent experience of an extensive shortage of food on a societal level in Sweden was during the Second World War, more than 70 years ago. Since then, the changes and development in agriculture as well as society at large were disruptive. Around 1990, 45 years after the war, the overall vulnerabilities at farm level had increased with the changes in farming (Andersson and Brorson 1991). At the outbreak of the Second World War in 1939, only parts of the Swedish farming sector was mechanized and more than half of the population were living in rural areas, a majority involved in farming or animal husbandry. The only vulnerabilities that then decreased was the crop production sensibility to weather changes (due to better drying techniques and the production of silage instead of hay) and amount of people needed for the farm work. This however, at the cost of technical development and size rationalization, making Sweden highly dependent on imported goods, like diesel, animal feed and spare parts. By the 1990s only 20 percent of the population still lived in rural areas and most farms were now run as a one person-business (ibid). This makes the number of knowledgeable labour much smaller, a development that has continued well into today where only two percent of the Swedish population is in any way involved in farming as a means of sustenance (SCB 2014, 238) and 85 percent live in a town or a larger city (SCB 2015).

During the period from the end of the 1940s to the 1990s, the development of agriculture and the Swedish food market were governed by national politics, working with a production goal, a consumption goal and an income goal. The ambition was to guarantee at least 80 percent of the national food demand through domestic production, to provide consumers with reasonably priced

food and to assure farmers fair wages as compared to industrial wages. Farmers, consumers and the state jointly negotiated price levels. Major streamlining in order to ensure efficiency and promote improved production methods led to a large increase in harvest and subsequent profit only a few decades after the Second World War. Not only was the production goal reached, but the over production that became a result of this was widely criticized. The surplus was sold at an under price and was criticized for creating unequal competition, especially for countries in the global South, trying to build their own market. Within Sweden this led to great economic difficulties for grain producers, large costs for the state and heavy critique from the environmental movement as well as others for leading to wasteful and environmentally hazardous production (Flygare & Isacson 2003; Eriksson forthcoming).

In light of this, Sweden decided to change the course of agricultural policy in the 1990s, choosing what Eriksson (forthcoming) calls a radical turn in politics. During the following six years, the domestic food market would be de-regularized and the public subsidies and support of the agricultural sector completely shut off. This political endeavour was however never completely implemented since Sweden began its entry to the European Union (EU) during the same time and the domestic agricultural policy subsequently fell under the Common Agricultural Policy (CAP) (ibid).

Previous experience from the two world wars was the primary foundation for the development of a transnational trade and agricultural policy alliance within the EU. The common political vision was that a stable national food supply is a key in guaranteeing political stability and the supremacy of the state. Similar surplus problems within the agricultural sector were common within the EU before the Swedish entry in 1995. The reform work started in the 1990s eventually resulted in reduced production outlay, but there was no deregulation of the market. Today all agricultural policy is governed on EU level (McCormick 2008). Since 2015 the main support within the CAP is direct payments given on a hectare basis, hence not taking into account what or how much the farm produces. During the current programming period, 2014–2020, the support is becoming more and more streamlined so that the same amount is given in support regardless of geographic location or the fertility of the soil (European Commission 2013).

Within the CAP there are no production goals or joint plan in order to secure domestic food production in the EU. Quoting Madeleine Granvik, sustainable planning researcher: "today the

Swedish back-up food supply is considered a part of the European open market” (Rytkönen et.al. 2013, 27, my translation). Hence, the connection between farming and food security is not a part of the political steering tools within the EU and in Sweden today. The idea is that the joint market will lead to a strong food sector across the union and that trade will resolve any regional or national weaknesses. Moreover, the EU decided on a solidarity clause in the latest treaty, stating that the union should act to “provide assistance to another EU country which is the victim of a natural or man-made disaster” (Eur-Lex 2016). However, this solidarity clause has primarily been used to counter terrorism; there is no focus on a shared food security plan.

The reduced role of agriculture and farmers in securing the national food supply during and after the 1990s is also related to the big changes in security policy during the same period. The above-mentioned study on agriculture vulnerability in 1990 (Andersson and Brorsson 1991) was made by the then active "Working Group on Agriculture and Society - ALA" at the Swedish University of Agricultural Sciences. It is the most recent study known of on farm vulnerability in a food security perspective. After the Cold War the interest in crisis prevention and food security issues quickly diminished, both politically and in academia. Today it is difficult to find documentation on how and when emergency reserves, which previously existed for both seed, fuel and foodstuff were sold out. But the result was that towards the end of the 1990s, there was no longer any reserves left in the caverns and defense resources were reduced gradually (Livsmedelsverket 2016).

Emergency preparedness for both peacetime crisis and war situations in Sweden today is governed by three principles: the principle of subsidiarity, the principle of responsibility and the principle of equality (MSB 2015). The first two mean that the authorities responsible in peace time also, as far as possible, are in charge during war or crisis, and that any crisis shall be resolved as local as possible. This means that if a crisis occurs and affects only residents of a municipality then the municipality manages the crisis, while the County Boards are responsible when several municipalities within the same county are affected by a crisis (ibid). Governmental authorities are primarily responsible for coordination and planning before, during and after the crisis, not for the operational implementation. Although existing foodstuffs is identified as so-called essential services, the agricultural production of food at farm level is not. Hence, it is not clear who is responsible for minimizing vulnerabilities and having an operational readiness for primary production in a crisis situation.

What is meant by essential services are those needed for the life and health of the population as well as those maintaining the fundamental values of democracy and freedom of expression, etc., as well as the functionality of society (MSB 2016). Today, the department of agriculture has a clear responsibility in terms of coordination and planning for crises concerning animal disease, food contamination and pests. Furthermore, the National Veterinary Institute (SVA) is a central authority possessing knowledge on disease control and emergency preparedness within animal husbandry. However, SVA holds no responsibility in securing a certain amount of domestic agricultural production during times of disruption, and are not bound by the responsibility principle in case of a crisis (MSB 2015). In all stages *after* production the National Food Agency (NFA) is, since 2010, in charge of emergency planning of food and drinking water supply. However, no government agency has the overall responsibility for food security in a crisis (Livsmedelsverket 2016).

The solution is often spelled cooperation between the actors implementing the operational aspects of food and distribution under normal conditions. The government summarizes, in the bill "Strengthening emergency preparedness - for safety's sake" (2007/08: 92), that private operators own an increasing part of the critical infrastructure, which requires cooperation between government and business. Furthermore, they argue that relevant private actors should be involved in identifying reasonable demands on important activities and that this cooperation should be based on voluntary agreements as far as possible (*ibid*). The private actors referred to seem to be the major food companies and wholesalers controlling the market. Any agreements or formalized partnerships, in securing the Swedish food supply in crisis, between Swedish farmers' associations or individual companies and the government do not exist.

In the beginning of 2015 a defense policy bill (Regeringens proposition 2014/15: 109) was presented, which assigned the central authorities the task to recreate the planning of a total defense, which in addition to a military defense also includes a plan for civil emergency. This is the resumption of a national defense and a strengthening of preparedness efforts after years of decline in resources and objectives in the area. This is driven mainly by the change in the European security situation and Sweden's closeness to the Ukraine crisis and the aggressive Russian actions in the Baltic region. Food is included as one of five specific areas of planning in the instructions for civil defense given to the authorities in charge at the end of 2015 (Regeringens beslut 11:16, 2015). The

central authorities for food and agriculture are therefore to identify vulnerabilities and the measures needed to ensure civil readiness in a crisis. What existed before is primarily a civilian emergency preparedness with a focus on rather short crisis scenarios such as storms that cause power failures, disease outbreaks in livestock and radioactive fallout from nuclear accidents. However, political unrest or disturbances in the trade routes hindering the import of agricultural inputs or foodstuff, has not been considered at all. A report from the Swedish Defence University (FHS) published in early 2016 found that the Swedish peacetime emergency planning is a good foundation, but not sufficient to meet the requirements of a functioning total defense. In order to continue this work the central authorities recommend the identification of critical infrastructure at different levels. They also stress the need to involve industry and retailers along with interest groups in the planning of the civil defense, as well as "further investigate the need for self-sufficiency planning (food production) from a crisis perspective" (FHS 261/2015, 29, my translation).

Even if governmental authorities are responsible for coordination in a crisis, it is at the farm level, by individual farmers, that production decisions are made and the actual work producing food or raw material is performed. Experiences summarized in 1946 on how the food supply was managed during the war shows that several new forms of cooperation between private and public actors began during the war years. Farmers took great responsibility, individually and collectively, to keep production going so that an adequate emergency food ration could be guaranteed to the population in a situation with severely limited imports into the country (Björnberg 1946). Sweden has a long and internationally unique tradition of freeholding farmers who have been an important social force and according to some even affected the so-called Swedish model, with a strong state alongside independent landowners and business owners as well as active unions and associations (see e.g. Trägårdh et al 2013). Agricultural cooperatives and interest organisations have in many ways contributed to the food sector, and historically had a major influence on agricultural policy in the 1900s (Flygare & Isacsson, 2003).

The farmers' role in the civil as well as military defense was active and partly voluntarily encouraged and created by farmers and their organisations. During World War II, farmers gathered on their own initiative to coordinate resources and together cope with wartime production in the so-called block-organisation. A block consisted of several farms that merged and operated as a unit when workers or horses were going into war service. These in turn were coordinated at the

local level by a block-leader, and regionally and nationally by the then existing County Board of Agriculture and the National Board of Agriculture. Worth noting is that the assembly was voluntary but almost all joined. In the report "The farmers' block-organisation" (Lantbruksstyrelsen 1991) the Board of Agriculture of that time found that 98% of the then cultivated soil in the country was part of a block during the war. The block organisation dissolved when the danger of war had blown over, but returned in a peacetime version in 1951. The idea was that a peacetime block organisation would work preventively and preparatory, under state and regional control but with a local management of a selected farmer who acted as block leader. The block organisation existed formally until the end of the 1980s, albeit in varying degrees active or well known among farmers (ibid).

## THEORY AND METHODS

In this chapter I introduce the central theoretical concepts used for the research and analysis, followed by a description and account for the methods and materials used.

### CENTRAL IDEAS AND CONCEPTS

The political changes in both agriculture and civil defense at the end of the 20th century follow a general trend in Western welfare states. After the Cold War ended, the liberal ideas alone were regarded victorious, which sparked a growing privatization of the welfare sector and an increased element of New Public Management<sup>1</sup> in public areas. This altered form of government in the Western welfare states such as Sweden, has been called the "advanced liberal society" (Rose 1999). The governance model focuses on a minimal governing of society, but rather a constant pressure on individuals to become "responsible citizens" (Dahlstedt et al, in Dahlstedt and Neergard, ed. 2013). In liberal theory the individual is seen as the subject of interest in society, and politics should primarily protect the individual freedoms and rights against the collective interest. These ideas have long existed as a strong political force with aspirations for collective rights and social equality guaranteed by the state (Lindensjö 1996).

In short, a shift towards a more liberal governance is visible in Sweden from 1990 and onwards. This can be seen as a change in the Swedish *social contract*, a model described further below. Some economists have seen this as a "correction" of the social contract after the financial crisis in the early 1990s (see Ola Olsson, In: Ekonomisk debatt 2013: 42, 53). A central theoretical question is then what happens to the responsibility for common, collective rights and obligations when the state is reducing its direct responsibility (c.f. Rothstein 2005). In other words if, and if then how, the state's withdrawal affects how farmers perceive their and society's responsibilities. This is the central focus of the analysis in this thesis. In order to perform the analysis the concepts of *political trust* and *reciprocity* are highlighted, the former mainly based on the role of institutional integrity and perceived shared values with the authorities. These concepts are explained in more detail below.

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<sup>1</sup> That is, to introduce steering and management methods similar to those of companies in the management of the public sector.

### **THE SOCIAL CONTRACT ON FOOD SECURITY**

The understanding of the relationship between government and citizens in terms of trust has been central in political science drawing on the idea of the social contract. The idea was developed, based on early Greek philosophy, in the early stages of the nation-state formation. The social contract can be viewed as free individuals agreeing to give up part of their sovereignty to a political leadership, a government. For this the individual is guaranteed security and even individual freedoms and rights, along with services such as schools and hospitals in the modern welfare state. The rules constituting the model of government, and which rights and obligations are to be secured by the citizens or the state is also seen as agreed on in a compromise between free individuals' interests and the state as the public – but also the national state guarantee. The extent to which the state is entrusted the responsibility over the common interests, or how much that is up to individual citizens, private companies or non-profit organisations vary in different social systems and at different times (Olsson 2013; Trägårdh *et al* 2013; Rothstein 2005).

In Sweden, the social contract has been based on strong civic ideals. All citizens are guaranteed the welfare state security and services, to the price of having the duty to try to work, pay taxes and participate in the political processes (Trägårdh *et al* 2013). Food security in crisis, and as prevention of crisis, has for long been part of the welfare state security work, since the 1990s thus decreasing as a direct responsibility of the state in Sweden.

### **POLITICAL TRUST AND RECIPROCITY**

Food security in crisis is a common interest which with the withdrawal of the state has become an example of the idea in sociology of "the problem of collective action" as described by Rothstein (2005). For the common interest to be met, cooperation is required along with the organization of many different kinds of people and actors, and if not everyone involved is doing their part it does not work for anyone. If an actor does not feel that the other actors will do their share in the collective responsibility the incentive to do it by oneself is reduced, even if it negatively affects oneself or the group as a whole in the long run. Thus, for society to work, a high degree of trust between all actors is required (see also Lichbach 1997). In political science this social trust is often studied as either vertical or horizontal trust relationships, which refer to the trust between citizens and the state (vertical) or trust between individuals (horizontal) (see Rothstein 2005 for an extended discussion). The focus in this thesis is on the vertical relationship between farmers and the state, what I henceforth refer to as *political trust*. This limitation is partly motivated by the



findings in several studies that the vertical social trust in Sweden in general is decreasing, compared to the horizontal relatively unchanged social trust (Rothstein 2005, Norén Bretzer 2005; Weibull & Holmberg 2013).

Drawing on Holmberg and Weibull (in Weibull *et al*, ed. 2013), peoples' trust in institutions can normally be traced to either the personal characteristics of the subject, features of the object (i.e. how the institution perform its' task), characteristics of the media-created pictures about the institution, or context-features (i.e. when and where the trust-relation is taking place). This trust-relation is changeable and dynamic and defined by the subjective expectations of how the institution is supposed to act and the experiences of how they succeed in this. Four central features of the object (i.e. governmental institutions) have been outlined by earlier research as important for creating political trust: the institutions competence, integrity, empathy and transparency. This together with shared values between the subjective and the institution (*ibid*). All these factors matter, but to a varying degree which is difficult to estimate (see Trägårdh 2009 for further discussion).

In order to understand the farmers' political trust in this study, the themes of integrity and shared values have proven particularly useful. Integrity is understood as the institutions' perceived ability to make fair and neutral decisions (Rothstein & Teorell, 2012). This is a clear part of the task of public authorities and therefore important to keep in mind when studying political trust in the state-citizen perspective focused in this study. This is also called "procedural justice", expressed in terms of citizens trusting authorities' decisions and actions, even if they affect the citizens themselves negatively. The trust increases if the subject perceives that the authorities act based on fair and just principles, equal for all (Tyler 2001). In a study on political trust in Västra Götaland, Norén Bretzer (2005) shows that citizens' experience of state institutions as acting along the lines of this idea of integrity is of most importance for the general political trust. Another common way to study social trust, foremost horizontal trust, is in terms of social capital (see Putnam 1993), but it has proven not to have the same impact on the vertical political trust (Norén Bretzer 2005), and is not used for this thesis.

Shared, or common, values have to do with the fact that trust is easier developed between peers than between people who perceive themselves or the other person (or institution) as different from themselves. This is related to transparency, the more farmers know about the governmental

institutions, which they are and how they work, and if they perceive them to be similar to themselves, the trust is likely to be higher. It has also to do with closeness, if the authority works locally or the governments' officials seem to know the farmers' local reality, the political trust increases (Holmberg and Weibull in Weibull *et al*, ed. 2013).

Related to integrity and shared values among central authorities is the concept of *reciprocity*. It is a central concept in all types of trust-relations or contract-situations. All parties need to experience that the other(s) involved in the relation take mutual responsibility. How one thinks that the other will act is weighed into what one experiences as possible, or as one's duty, to do. It also becomes interesting to study whether farmers see themselves as a participating party in a trust- or contract-relationship for food security at all, or if it is perceived as a non-issue. The maintenance of the public interests is consequently based on the vast majority participating in demanding accountability and fulfilling one's own obligations. It is, as Jacobsson (ed. 2011) stresses, through this participation that people's subjective perceptions of trust in others and society in general is developed and maintained. Political trust is thus both a sense of participation in society and the believing that the social apparatus works, the political leadership and governance will take responsibility.

#### **FARM VULNERABILITIES IN A BROADER THEORETICAL CONTEXT**

Finally, it should be pointed out that the food chain is a complex system where the farm level and agricultural production is an important part, but also transports and logistics, wholesale, processing, foodservice, retail trade and importers, authorities and private households play a role for food security in both crisis and under normal circumstances (Livsmedelsverket, undated). A system's ability to cope with crises without central functions being destroyed, i.e. to be able to recover and change with crises, no matter how often they occur or how likely they are to happen, is often analysed in terms of the systems resilience. This thesis however, is not a resilience study since I have a more actor-oriented focus on the farmers' views and experiences. However the concept of vulnerabilities and risk is used similarly in resilience studies. Drawing on Tuler *et al* (2008) I understand vulnerability as closely linked to risks (i.e. the probability of the hazards). How people experience stress and risks and their own ability to cope with the outcomes of hazardous events or stresses define the actors' vulnerability (*ibid*). These vulnerabilities are linked to both material and natural factors as well as to the human, cultural, economic and political ones

(cf. Berkes 2007). Farming and farmers are more and more studied in its so-called time-spatial context; farmers' conditions are site-specific and change over time based on both the natural environment and the social, economic and political changes in society (cf. Milestad et al 2012). This process focused approach I add to in this thesis.

## **METHODS AND MATERIALS**

To research farmers' political trust, related to food security in case of crisis, a case study based primarily on interviews has been conducted. The research questions are qualitative; the subjective views, values and attitudes that the farmers express cannot be researched by statistics or simplified surveys. Interviews are suitable particularly when researching questions that focus on people's *attitudes* or *values* (Kvale & Brinkmann 2015). The research questions are not concerned with the informants' subconscious attitudes expressed only by acting, not possible to reflect upon in a conversation. Hence an observational study is neither needed nor possible to carry through since observations enquire the researcher to follow the studied proceedings when they happen (ibid). The specific interview method used will be explained further down. First follow a presentation of the study area and the selection of material and informants.

### **STUDY AREA VÄSTRA GÖTALAND**

The case study was conducted in the county of Västra Götaland, in south-west of Sweden. The region was selected because of the variety of farm districts, which enables a study on farms with different sizes, production types and geographical conditions. The differences in farming conditions in the county make the vulnerabilities described in the report to a relatively high extent transferable to other Swedish farmers, as is also suggested in a report which focused on sustainable agricultural production and distribution in Västra Götaland (SIK, 2014). This thesis, however, is primarily a qualitative case study, which rather shows deep-delving examples of complex phenomenon than an exact representation of all farmers. Generalizability is instead ensured as much as possible by the theorizing built on established theories and by relating the case study to other studies on related themes.

### **EMPIRICAL DATA AND STUDY DESIGN**

The study started with a general orientation in the field by an overview of recent literature and also older materials such as reports on crisis management and food contingency planning to get both the historical and academic context of the topic. The interview study was then planned

together with the researcher Camilla Eriksson and the master student Josefin Heed. The interviews were performed during three weeks in February and March at the farm sites; normally we made two farm visits with interviews per day. In addition to farmers we also visited and interviewed key informants at the County Board, the University of Gothenburg and the SP-Science Partner in Gothenburg. All of these interviews or meetings were with experts or responsible persons in crisis prevention and management and farm production in the county. Interviewing these people served the purpose of covering the field and secure that we got the sources needed from the specific region as well as in the scientific and practical field in general. The material from these interviews is not referred to in this thesis but has been of help to orientate and find literature of use.

200 active farmers in Västra Götaland were randomly selected with help from the SCB – Statistics Sweden, (therefore called the SCB-sample from now on), out of approximately 12 000 active farms in the register of farms in the county. Out of these, the 20 informants were strategically selected based on farm size, production type, age and gender of the farmer, conventional and organic certified farms and geographic location in the county. We wanted to interview farmers with as different farm conditions as possible, to catch the complexity among farmers out of the data available. A strategic selection of informants is a trusted way to ensure that you get the differences and dispersion needed for a qualitative study based on few samples like this one (Teorell & Svensson 2007). We contacted in total 30 farmers, out of which nine no longer were active. Only one farmer we asked to join the study did choose not to join of other reason than retirement from farming. When booking the interviews we always asked for the one responsible for the production and company, and if they were two we tried to meet up with both. This resulted in that we totally talked with 27 persons in the 20 interviews.

Two of the farmers in the study were found by other means than the SCB-sample. One farm on an island were found through the interest organization for archipelago-farmers, and one were recommended by one of the other informants when we asked about someone who also processed at the farm and made a full time work out of a relatively small size farm. Except this, the farms classified by SCB as “smallholder” were not taken into account because we primarily wanted to have farmers who have part of their income from the farm. What the informants have in common is that at least part of the production and total income is food production. Although many of them

partly earn their livelihood from off-farm work, tourism or other farm-based but non-food producing activities, it is mainly the food production role we focused on during the interviews.

The 20 farmers interviewed are listed in Appendix 1. They have been given other names and some unique farm information has been deleted or rewritten to ensure the anonymity. Before we met up for the interview the farmers got a small brochure with information about the project and contact details to Camilla Eriksson as research project leader, to make sure they were aware of the aim of the interview. Furthermore, the farmers were asked if they were fine with us recording the interviews before we started. The recordings have then been stored only on the computers of the three of us who use the material. All interviews was listened through by me and important parts or quotes needed for the aim of this study have been written down. A full transcription of the interviews has not been done, for time saving and because big parts of the interviews were not relevant for my research question. The documents with the notes have been stored with anonymous numbers instead of the interviewees' real names. Adhering to these research practices ensures participants the possibility to be open and contribute to science without risking their reputation or having to take responsibility for the result of the researcher.

#### **TO TALK ABOUT CRISIS – THE INTERVIEWS**

The interviews were held at the farm site, in the farmers' private kitchen or at the farm office, which serves two main purposes. First, it is most convenient for the interviewee not having to spend time and energy traveling to a second location. This also helps preventing the informant from feeling nervous or insecure. The interviewer has already set the agenda and is normally more comfortable than the informant who has not been planning the interview. The more well-known the context is the better for the conversation to run smoothly (Kvale & Brinkmann 2015). Second, doing the interviews at the farms we wanted the farmers to talk about gave us the possibility to look at the production. We tried to make time for the farmers to show us around on the farm if they agreed to that, which most of them more than happily did. Often new aspects of already discussed topics came up when showing the production and walking around on the site.

We always started the interviews with asking the farmer(s) about the basics of the farm and the current as well as former production. Then we let the interview move on as a conversation, but steering it successively into the topics of dependencies (e.g. production-inputs or need of transportation from the farm), experiences of crisis and whom and how they trust to "fix it" in a

case of crisis. This interview method is typical for semi-structured qualitative research interviews; the interview is similar to an everyday conversation but covers certain important topics that are the same for all the interviews in the study. Furthermore the qualitative research interview focuses on the *meaning, attitudes* and *values*, questions are asked to get the interviewee to reason about feelings and subjective perceptions rather than plainly report facts or short answers (Kvale & Brinkmann 2015). In order to remember to cover the important areas in the interviews, we developed an interview template, not for reading questions from but for checking during the interview that we covered the areas we should (see the full template in Appendix 2). Since we were three researchers performing the interviews there were more questions to cover than needed for only this thesis. We also shared the talking during the interviews, normally asking a bit more on the areas of interest for our specific research questions.

The farmers where asked about crisis in two time-perspectives, a shorter and a longer one. They are used mainly as a way of getting the farmers to reason around the farm production vulnerabilities and their role and responsibility for society's food supply. The shorter time crisis focuses on a situation close to the official crisis management definition used by central governmental agencies in Sweden. Its characteristics are that it happens unexpectedly, rapidly and affects many people and big parts of the society (MSB 2014). The time span was from a couple of days up to a week, but with the added uncertainty of not knowing for sure when it would be solved. The longer perspective then is when the whole food sector and society faces a longer period of limited or blocked import of foodstuff as well as supplies of importance for the food production or distribution. The farmers where here asked about a situation going on for a whole season up to several years.

The county has also experienced sudden and unexpected crisis relatively recently with the big storms called Gudrun and Per. The experience of crisis management from these storms can be discussed with regard to if it has affected how they view their vulnerabilities or what they see as their responsibility to do or not for society in a crisis. It is one of the biggest drawbacks with interviews that there is always a risk of discrepancy between what people say that they would do if this or that happens, and what they actually do in real life. This risk with the interview as method increases somewhat of the fact that a crisis is hard to imagine and not part of the normal life.

## **INTRODUCING THE FIELD: THE ON-FARM VULNERABILITIES**

This chapter is a review of how the farmers see their production abilities in the short-term and the considerably longer crisis perspective respectively. This is described along with the main dependencies and vulnerabilities shortly outlined. These concrete crisis aspects are included mainly to further on understand the results and discussion on the farmers' political trust and role for food security in crisis in next chapter. Hence I do not aim to make a full report on all vulnerabilities or crisis aspects of on-farm production dependencies.

In the sectoral risk and vulnerability analysis the NFA – National Food Agency (Livsmedelsverket undated) noted for the agricultural production a high dependency on inputs and capital, transport, machinery and functioning deliveries. For some production types access to infrastructure such as electricity and water, existing seasonal workers and the surrounding community where also identified as dependencies (ibid). All of these dependencies and vulnerabilities came up in different degrees in all the interviews related to crisis in the two time-perspectives.

## **SHORT-TERM CRISIS AND THE ROLE OF PRODUCTION SCALE**

The farmers where asked about a situation when the central functions in society such as transports, municipal water and/or electricity are out of operation for at least a couple of days, but with the risk of continuing for weeks. This kind of crisis for a couple of days is quite easy for the farmers to imagine. Some of the interviewees also have real life experiences from one or both of the two bigger storms that affected the area in the past decade (Gudrun and Per). The electricity were out and the roads in many areas where blocked with fallen trees. But, longer time than a few days have no farmers experienced and it soon becomes hard to find solutions on farm.

In the report from 1990 (ALA, 1991) it is assumed that the rural residents would cope better in a crisis than urban dwellers, referring to a supposed widespread practice of producing vegetables and maybe some eggs for the household on all farms. But today, only two of the farmers interviewed in this study had gardening that produced more than some fresh potatoes for midsummer. In a short-term crisis, citizens in Sweden are recommended to have a preparedness to be able to take care of oneself for at least 72 hours (Civilförsvarsförbundet, undated). Many farmers were thus not aware of this and were not sure if they would have food enough or the possibility to prepare it even for those hours.

For the farm production, the most important vulnerabilities in the short-term perspective are electricity, transport to and from the farm and to some extent fuel. This is the case for all farms, but to varying degrees and depending on when during the year the crisis occurs. Especially all animal production, except beef, is facing acute problems within a day or two if central functions are out; they are particularly dependent on transports to- and from the farm. The last week before slaughter the broiler production gets delivery of feed every second day, the volumes of fodder needed is simply too big to store on-farm longer than that. Also, if the animal-transport from the farm to the slaughterhouse is delayed more than a day or two, both poultry and pig production are facing big troubles securing the welfare and health of the animals. Likewise the dairy farms do not have capacity to store the milk for more than the two days between the milk truck visits. But in the dairy case, the farmers could easily pour the exceeding amount of milk out to be able to continue to milk the cows to keep them in good health.

When it comes to electricity the crisis prevention on farm seem to be better today than in the latest report on farm vulnerabilities from the 1990s (ALA, 1991). Since a power failure in almost all types of poultry as well as pig production would endanger the life of the animals within hours (mainly because of the need of functioning ventilation), they are obliged by law to have access to functioning back-up generators. This is also the case for dairy production since the milking machines run on electricity and the cows soon get health problems (foremost mastitis) if not milked in time. These generators normally run on diesel, and all farmers were sure that they had stored diesel for a couple of days, if the crisis did not occur on the exact day when the diesel trunk was supposed to arrive with refill. But not one of the farmers interviewed knew how much diesel the back-up generator uses and they had never had to have it running for longer than a couple of hours, up to maximum a day or two.

The timing is central to how a crisis hit at farm level. Especially all types of plant production are much more vulnerable during a couple of weeks in the spring and during harvest in the fall than during the rest of the year. Many grain producing farms dry the wheat or other cereals on farm, a process that needs a lot of energy and if not done in time the harvested grain rots or germinates due to the moisture. But if a short-term crisis as described above occurs in winter, even for a couple of weeks, the crop producing farmers are only affected at household level.



The vulnerabilities somewhat increases with the scale of the production. A bit simplified, but still confirmed by all informants, the scale of the production does matter for the possibilities to manage the production in other ways than under today's circumstances. This at least applies if the crisis occurs without any prevention, like storage of inputs on the farm. But farmers today do not have much extra-capacity for storing, cooling or processing their products on farm than what is needed for the production during normal circumstances. Watering and foddering animals is also in most small-scale production systems mechanized or dependent on functioning tractors with diesel. Hence also smaller dairy and beef or sheep production that does not necessarily have a diesel generator for electricity are quickly affected by a power-cut, but these farmers expressed that they could let the animals out on fenced grazing areas in worst case. Many of the smaller farms also knew that the animals can find drinking water on the pastures. Hence a short-time crisis does not risk the animals' welfare to the same extent as for the big scale indoor-based animal production.

With size come also other vulnerabilities. The scale on all broiler- and most major pig farms means that they only have one option to the slaughterhouse that is able to receive the volumes they deliver. As for broiler, the entire production is directly determined by Kronfågel, one of the two dominant players in Sweden on poultry. One of the informants, Birgitta, tells us how the decisions by Kronfågel affect the concrete everyday life and business situation by imposing requirements on how many groups they should produce per year. With the increased demand for chicken Kronfågel wants to maximize the production as much as possible, forcing the producers to have eight rounds per year. Birgitta would rather have had seven, as it becomes stressful to clean the stables between the groups, which create uncertainty on the sanitary and health status of the birds. As they do not have the opportunity to choose something else, she has to follow the requirements, which she finds partly problematic.

This experience of being in the hands of a much larger market player is also expressed by virtually all dairy farmers, especially those who have contract with the dairy Arla. What they all have in common is that they perceive an unequal power relationship compared to the big slaughterhouses and dairies, and that this creates direct harmful effects both economically and socially. The farmers cannot control their own production, since they are dependent on the contracts which are determined by the stronger actor. Farmers do not feel that they, not

individually nor through their organisations, have the same opportunities to influence the rules and market practices as the bigger players. This is a relatively unhandled phenomenon in Sweden and Europe so far, but has long been discussed internationally. In March 2015 this problem was, however, discussed in a workshop in the European Parliament, in terms of unfair trading practices (European Parliament 2015).

For the food supply at national level in crisis, however, the farmers' role is rather limited in the short term perspective, even when looking at a period of a couple of weeks. It soon becomes up to the transport- and logistic sector to solve cooling-systems and distribution of the food from the farms to consumers. Farmers see potential in sending animals to slaughter earlier if needed for meeting the demand as a short-term solution, but this foremost becomes an issue for the slaughterhouses. Farmers seldom transport their animals themselves. Transforming the farm production to meet a new goal (of maximizing production of food available for consumers instead of maximizing the production for profit as today) takes time, at least one season. Therefore the longer crisis scenario described below is more interesting for discussing the farmers' role for food security in crisis at national level.

### **LONG-TERM CRISIS AND NEED FOR AGRICULTURAL TRANSITION**

For the long-term crisis we imagine a situation when the trade with foodstuff as well as inputs important to the agricultural sector is obstructed for a period of at least one season, but up to several years. This is similar to the time perspective in a report on food security-consequences in case of shortage of fossil fuels in Sweden which focused on 3-5 years (Baky *et al.* 2013). Their result that the national food security is highly dependent on fossil fuels is confirmed by the farmers in this study. The access to diesel is the overall most important factor affecting the vulnerability in the long-term perspective, at farm-level as well as for distribution of foods.

We asked the farmers for possible strategies if they would get half the amount of fuel as used today. This is a situation which Baky *et al.* (2013) name medium absence of fossil energy, which they conclude creates “a situation (...) where it is not possible to keep the population above the breadline” (p. 51). Hence a major shift in agricultural production is needed. The dependency of fossil energy is directly dangerous in a crisis situation with blocked import. Transition towards

less or zero dependency of fossil fuels is as important for crisis-preparedness as for climate-crisis prevention.

Only the relatively small-scale horticultural production farmers saw any possibilities to produce without any diesel at all, if no similar fuel were to find. This is mainly because the horticultural production is based on much more manual work than any other farm production. Even if soil preparation and some other operations are done with tractors, the horticultural production is much less mechanized than the rest of agriculture. International findings also find that smallholders play a key role for food security, since it normally focuses the production on ready-to-eat products for local markets, compared to the industrial grain production for global markets (IFAD 2013).

What is needed in the long-term crisis is to maximize the farming to produce as much food per energy input and land unit used as possible. We asked the farmers how they could, at their farm and with their knowledge and other resources, produce best amount of anything that provides a good source of protein, carbohydrates, fat, vitamins or minerals. It soon became clear that this is not the way farmers today are used to think about their production. All poultry producers said that it would be impossible to continue with the animals at all, one of the farmers even suggested putting rabbits in the stable instead. The same is for big scale pig production. It is easier with all types of animals that can feed on grass, since the shortage of fuel would result in less cereal production. The cereal produced would also be needed for human consumption, meaning that less farm land would be used for fodder production. The beef and sheep producers interviewed said that they could have more animals on their pastures today, the reason they do not have it today is that the animals they have is enough to keep the grasslands open and their most important income is rather the EU-support for manage of grasslands than the sale of the meat.

When given time to reason around it, many of the farmers also see solutions and possibilities at farm level. Especially if assuming that a long-term crisis and acute need for food like this does not come over-night but rather develops fast but with some time for preparing. If the demand for food is altered and the prices follow, the farmers are almost hopeful about their possibilities in crisis. As long as there is not a humanitarian catastrophe, a shortage of food would from a farmer perspective be positive, as it might get the prices up to a level when it becomes viable to live

even from medium- to small scale farms. This is also what the lessons from history shows; in periods of shortage on food the status and profitability of farming is raised (Nordström Källström 2008). But as seen in the background, the farming situation today is completely different than before 1939, meaning that we can only partly learn from that history.

The knowledge about crop rotation and other methods to optimize the nutrient available for plants is higher among the farmers we interviewed than in the report from 1991 (ALA). Crop rotation and other organic farming practices were only referred to as “alternative farming” and were used only on a few farms. Today all farms, including the conventional ones, know how to use manure and rotate crops to get the nutrients from preceding crops. Also, the knowledge from organic farmers on long-term soil fertility could be of use for all farmers in case of crisis in the import of fertilizers. Verner, one of the large-scale grain producers we met, converted to organic farming for about 20 years ago and says that he now have a high amount of nutrients available in the soil for years even without adding anything. The production would decrease a bit for every season of crisis situation, but he would still be able to produce.

It is clear from the interviews that there is a huge hidden potential to improve the food available at the vegetable growing farms, due to the waste and inefficient use of resources that exist today. Especially the potato industry is characterized by a market demand which is not in tune with what is actually produced on the farms. Torgny and Tobias, potato producers from two generations, described how they harvest much less potatoes than possible because of the demand for small “delicacy”-potatoes. They could harvest one month later and get much bigger potatoes out of the same land and input use. Further on there are a huge amount of potatoes and other vegetables going to waste due to that they are too “ugly” to be sold.

## **RESULT AND ANALYSIS: FARMING IN SOCIETY**

This chapter aims to describe and discuss the results on how farmers view their and society's role and responsibility for food security in case of crisis. First follows an analysis drawing on two common ideas or ideals of what farming should be: a business and a lifestyle. These ideals are about the farmer as a businessman identifying with the farm as any industry or private business, contrasting with the ideal of a farmer as connected to the place and identifying with a certain production type. These are common ideas about farming that all farmers in the study directly or indirectly related to when talking about their own role and responsibilities in society in general as well as for food security in crisis. Most farmers perceive their work as characterized by being both a lifestyle and a business management (see Nordström Källström, 2008). As these are *ideals* of what farming should be guided by, both could be expressed by the same farmer during different parts of the interview. In fact, all farmers interviewed somehow related to both ideas, but many identified more with the one or the other. These are also ideals that farmers mentioned as expressed by the rest of society, which in turn affect the farmers' own view of themselves and their role. By discussing this I aim to answer the first research question, "*How do today's farmers view their role and responsibilities in the society and the food chain?*"

One could assume that these different ideas about farming would result in different views on the role of farming in case of crisis. Therefore, I then discuss these two ideas about farming in relation to two more emerging results in the interviews regarding food security: the weakening link between the farming and food, and the farmers' ambivalent trust in central authorities. In this discussion I aim to answer the second research question, "*How do today's farmers trust public institutions on emergency preparedness for agriculture and food security?*"

### **THE BUSINESSMAN FARMER IDEAL**

The ideal about the businessman farmer is expressed as viewing the farm as an enterprise just like any other business. This idea is eagerly stressed by the farmers as an ideal of how a farmer should be or act to run a farm in a desired manner. This ideal is also related to the ideas communicated by other actors such as the Swedish Farmers Organisation (LRF), hence it is also related to by the farmers who did not fully agree on or identified with this ideal. The idea about business farming results in farming strategies on what to produce or not and how to do it almost exclusively based on detailed economic analyses. Also, a long time perspective on profit and

company development for many years forward is common within this ideal on farming. All farmers of course want to make a living out of the farming, but it is also known that there are other approaches and driving forces to farming.

The growth of production and business size is often fascinating for the farmers who identify with the business idea about the farming. As Benny, broiler producer, said:

*"I don't know if we have any goals, well the goal is to make money – it is the only goal we have. (...) Then I'm fascinated in big volumes as well (...) in poultry it is constantly big volumes and new animal groups coming, I think this is fun."*

(Benny. Broiler, eggs and horticulture farmer. My translation).

This fascination for production-size and to grow in both volume and profitability as Benny expresses so clearly, is part of the idea of the farm as interesting for the company management and profitability more than for the practical work or production type in itself. Furthermore, this ideal motivates a size and turnover that is comparatively big. Often, farmers expressing this view also invest in several production branches to spread the economic risk as well as the benefit of labor evenly over the year. To some extent it could be argued that this also lowers the risk in case of crisis, since many different production types could mean that at least some of them could be continued and give food, even if some of the others are out of order due to e.g. lack of inputs.

The large scale makes it possible to have employees and see the farm as a workplace similar to an industry, rather than as a home. An important aspect of this is that having employees imply company and socializing at work, which is not possible on most smaller-scale farms. This idea also attracts those farmers who like the role of leaders; the idea about farming as a business is more commonly expressed by the farmers who see themselves as business-leaders rather than as farmers. Not all farmers socialize with other farmers outside work, or are active in farmer organisations. This contrasts with the idea about farming as a lifestyle; the farmers identifying strongly with the idea about the business-farming does to a quite low extent see the specific farm place or the production type as important. Besides investments in houses or machinery, the farmers identifying with this idea can switch to an entirely different production if it seems better for the company development.

The absence of strong identification with a specific farm or production type creates flexibility for solutions other than the present production. The farmers strongly influenced by the idea of business-farming are generally very flexible regarding what the farm produces, which in turn creates openness towards radically different strategies of farming if needed. This flexibility means opportunities when coming to crisis strategies for food security. The idea about business farming creates an approach among farmers to easily imagine producing something else if the demand changes. The ideal also leads to a “lets solve it”-attitude towards challenges. This was clearly expressed by Micke, when discussing his farm strategies for the future:

*“I can’t win by doing it one specific way, or the way I’ve been taught earlier, you have to change and do it in new ways, I think that is the biggest challenge for most farmers ... You have to adapt and change to the price you can get, other ways you just put the cost somewhere else and that’s not sustainable in the long run.”*

(Micke, dairy farmer. My translation).

Micke had recently invested in new technology for renewable fuel and had several plans to develop closed recycling of energy on the farm, with on-farm processing of the milk as one example. He would, as all farmers in the study, face big problems if a crisis occurred today, but the long term strategies and ideas shows that the openness for “any kind of business” creates on-farm solutions that would make him much more invulnerable in the future, if his plans succeed. However, regardless of their idea about farming, with time all farmers have generated more knowledge and experience of one production than another, which means that the flexibility decreases with age and time.

### **THE LIFESTYLE FARMER IDEAL**

This idea about farming is typically expressed in terms of valuating a long term management of land, knowledge and traditions. For almost all farmers the specific conditions of working with a strong bond to a place and close to nature makes farming a time consuming and lifestyle-like profession. This ideal however, emphasises the driving forces to be a farmer as having to do with the continuing to farm a specific farm as part of a family tradition or personal bond to a place, or to work in close contact with nature, e.g. a specific type of animal or type of production. In other words, the farmers influenced strongly by this idea express a strong identification with the practical work related to a specific farm or the specific production type. The lifestyle ideal result

in a strong interest and identification with the practical work in itself, whether it is repairing the tractors and machines or to see to the animals. A strong feeling for a specific farm or place is often linked to a long family history on the farm, similar to Flygares & Isacsson (2003) definition of the traditional family farmer. This ideal is also close to how Nordström-Källström (2008) describes “the farmer in consonance with the nature” (my translation). Even the farmers not having kids who surely wanted to take over could express a long-term responsibility to manage the land so that it can continue to produce even after their time. This ideal motivates a long-term planning on cultivation of land, above all to manage the landscape to prevent the farmland from overgrowing.

In a crisis perspective the lifestyle idea about farming creates opportunities in that the farmers identifying with this ideal often possess knowledge on other ways to produce than the mainstream, or most profitable, production. On the other side, the lifestyle ideal also results in that the farmers are less flexible to change production if needed in a food or input shortage situation. The deep interest in a specific production type means that the willingness to produce anything else is very low, even if needed or better payed. This is strongly expressed by many of the dairy farmers, many of which would rather stop farming than change to other production, or even another breed of cows. Also some of the grain and horticultural producing farmers expressed a deep interest for gardening or plant production, which implies that the motivation for farming is connected to the specific farm-type.

#### **FARMING FOR FOOD – A WEAKENING LINK**

A growing level of compensation for environmental adjustments within the agricultural sector makes it politically and institutionally more visible as an environmentally challenging and landscape preserving sector than as a food producing sector. In Sweden this has been discussed in terms of agricultures’ changing pursuit, and historian of agriculture Janken Myrdal (2001) writes that farming now faces a new role in society. Farming is more and more expected to provide the public with biodiversity, cultural environment or experiences, parallel to what Myrdal calls the basic production, i.e. food, fiber or energy. This is reflected by as good as all of the farmers interviewed for this thesis. When asked on how important it feels for them that the farm produces food the answers often were “not at all”, or decreasing, like the farmers Magnus said:



*“Well, sometimes I wonder if it's that important. Sometimes it feels like you have a kick in the ass when you're working and producing when you do not have anything for it! Of course it has been important for long but one begins to get a little different mindset sometimes now ...”*

(Magnus, dairy farmer. My translation).

As Magnus also expresses, many farmers see the food-producing as the farmers' real or rightful role, but due to lack of positive feedback from society at large and low profitability this is changing. This is also proved by Nordström Källström (2008), stressing that if food production is not viewed as important, nor are the farmers, this will in turn affect how farmers identify and see themselves. She also adds that farmers rather would like to be associated with food production, but they experience from many parts of society that they are rather associated with the new pursuits in Myrdal's terms. Moreover, she shows that the farmers refer to how society view farming as negative or problematic due to environmental pollution or climate problems (ibid). Conflict relations with neighbours due to farm activities that disturb the silence, smell or supposedly pollute the waters are reflected by two of the farmers interviewed. But mostly the farmers rather refer the negative associations from the rest of society to media, animal rights- or environmental organisations, or to negative experiences from central authorities as discussed in next chapter. Furthermore, this strongly affects the farmers feeling of their role for the food security in case of a crisis:

*“Well, responsible no, then I feel more responsibility in that I want to produce something, I want the earth to produce something. But then if it is for people to have food or because it keeps the land from becoming overgrown I do not know. (...) We are so accustomed to the imported food today; we've got no responsibility today to produce for people to have food.”*

(Mats, dairy farmer. My translation).

What Mats also gives voice to above can be seen as a reciprocity-logic on food security; the focus on other things than food production from the rest of society regarding agriculture creates a feeling among farmers that their role in society today does not have to do with society's food supply. This results in that the farmers do not feel responsible for food security in crisis. Notably, this is expressed both by the farmers who identified more with the lifestyle ideal and those who identified with farming as the businessman ideal. The reasons and explanations behind it thus vary a little depending on ideal. Among the farmers who identify more with the lifestyle ideal it

is more common to relate a lower feeling of responsibility for food security to that the landscape management, or family traditions, are regarded as more important. Although most of the farmers strongly relating to the lifestyle ideal also expresses that it is important to produce food, no one mentions it as the most important part of farming and only a couple of them expresses that it is important to know where the food they produce is being consumed. However, the farmers strongly influenced by the lifestyle ideal on farming would unwillingly quit farming and change into other business; they relate to a responsibility for the profession as such and to continue with the land cultivation and longtime management.

The farmers strongly identifying with the ideal about the businessman farmer rather relate to their role as local business managers than farmers. The lack of connection to a specific production type, or even the farming as such, also makes it easier to leave agriculture and go into other businesses if possible and more profitable. Surely, even the business farmers expressed an underlying idea about that farming “should be” about producing food, however when asked about their role in society they relate more to their role for the local working life and economic development than to the local or even national food security. Hence food security can be seen as related to the farmers’ experiences of being outcompeted by the growing import, foremost from other European countries. This problem, which is affecting the whole agricultural sector in Sweden today, is also reflected in how the business farmer typically do not see themselves as being food-producers as first role. The market prices on food and the pay to farmers are too low today for many farmers to live on their food-produce. And with small margins and economic stress and pressure, you find it hard to plan ahead in any company, even less plan for crisis prevention (c.f. Nordström Källström 2008).

The relation to, and knowledge about, on-farm food production or processing also seems to be decreasing among farmers. In a crisis situation, most farmers except the poultry farmers know how to kill an animal if needed. But only half of the dairy farmers and the two beef-producers in this study knew how to slaughter and take care of the meat on farm, in case of a quick need of food. Milk is easy to sell directly at the farm if needed for the surrounding community, but the volumes are hard to find use for without a dairy processing it. The same apply for the meat at bigger scale animal farms. The knowledge on how to can slaughter is not much of a help if the facilities and storing places needed to take care of bigger volumes and provide food for the

whole community or region is not there. Hence, the closer it is between farms, the processing and the consuming the less vulnerable the local or regional food security is for disturbances in the transport system and fuel shortage. On-farm processing is not the mainstream practice in today's agriculture. The trend is growing, but seen by the farmers in this study mainly as a way for smaller-scale or part-time producers to get the profitability up. This means that the farmers who produce the majority of the food do not have access to processing or storing close to or on the farm. A local food chain is therefore a way to improve the food security. This is also argued by Granvik (2013), stating that municipalities have a security-interest in localizing the food chain.

In case of a long-term crisis, as well as in an environmental perspective, the production shift needed to get out of the dependency of fossil fuels is large enough for most farmers to feel that it is a completely other kind of farming than what they do and know about today. Most of the farmers therefore answered that they would need to dimidiate the land farmed in case of a rationed share of diesel by half. All farmers over 60 (6 out of 20 interviewed) stated that they probably would quit farming if the conditions would change that much. Age is an example of factors that makes it harder to imagine changing production type or methods. However, younger farmers too expressed that they would lower their production in case of longer-term shortage of inputs rather than working more or employing more people, especially if the prices on their sale also goes up. This is also found in the research of Baký *et al.* (2013), summarizing that in case of a long time crisis the production would decrease on the majority of farms compared to today. Furthermore they also find that farmers do not necessarily choose to produce what is most needed in society, if the government does not create the economic incentives or impose a certain amount of produce per farm (*ibid*). This is supporting my results on this. I find this weakening feeling of responsibility for food security among farmers to be related to the feeling of not being valued as food producers, which is furthermore strongly connected to the political trust among farmers.

### **POLITICAL TRUST AND THE "WAIT AND SEE"-APPROACH TO CRISIS PREVENTION**

The trust for central governmental institutions with relevance for agriculture is low among the farmers interviewed in this study. The farmers are experiencing that it is hard to influence the decisions that affect the business and that those decisions are taken far away from the farmers'

reality, by people who do not seem to have understanding or knowledge of agriculture. This is also found in the research of Nordström Källström (2008), as an explanation of why farmers commonly are heavily against many of the environmental support systems and agricultural policies. This strongly affects the political trust among farmers. In an interview study about the environmental support programs in the county of Skåne, only 20 % of the farmers said that they have a positive attitude towards the central governmental authorities (Larsson, 2004).

This weak trust for central authorities that seems to be the case among the farmers can be explained by two main factors, found in the interviews. Firstly, the politics around farming are seen by the farmers as not derived from values shared by the farmers. This is related to the valuing of food production or not, as seen above. The experience of not being viewed as important for food production in the policies and in society as a whole, clashes with the still underlying idea about food production as the rightful task for farmers. This view on policies as not created with focus on the basics in farming negatively impact how farmers evaluate the politicians and authorities behind these politics. Secondly, many farmers experience that the decisions made by the central and regional authorities are sometimes unfair. For example there is a widespread view among the farmers that the County Board more often performs on-farm controls for EU-support on small-scale farms than on the bigger ones. This result in that the controls are regarded as generally unfairly performed. Some of the farmers also have bad experiences from animal welfare controls, one farmer even stating that he stopped having animals due to several controls made by young controllers which he experienced did not have sufficient knowledge to do a professional assessment. Later on, he had been in contact with another part of the County Board, who gave different information and wanted him to have animals to graze a natural reserve. But this only strengthened the feeling that the controls are not made equally and that the County Board does not seem to have consensus between different parts of the organisation. The latter add to a feeling of the governmental authorities as far away from the farmers' reality.

Another example is how the elderly farmers Viola and Viktor experience how the requirements for land management changes over time without seeming to build on proper knowledge. In the 1980s they were punished for having too many birches in the forest, now they get extra pay if they have them there, as an example. The same farmers also experienced that they were deceived

by the state in the early 1990s when they got paid to take arable land out of production, but only half of the year. Viola and Viktor exemplify how the trust can decrease more and more if more negative experiences are added over time.

In other words: the County Board is seen as not working with enough integrity, which decreases the farmers trust for that institution (c.f. Rothstein and Teorell, 2012). This might also have to do with the big impact the EU has on the farmers' everyday life conditions for farming, since it is so centrally governed from the EU. Overall in Sweden, the institutions which are getting the lowest rankings on political trust from the citizens from year to year are the EU-institutions (Weibull and Holmberg 2012). Several of the farmers also stressed the recent topic of delayed EU-payments from the Swedish Board of Agriculture (Jordbruksverket). This is seen as a major problem for many farmers, causing economic stress on already tight budgets as well as pressure from the banks. Without disregarding the farmers who actually are affected by this, it was however clear from the interviews that many more of the farmers talked about it as an experience, than was actually affected themselves. This is similar to what Nordström Källström (2008, 85) calls a "storytelling-tradition" among farmers, building on the idea of farming as a free profession, but which "overemphasize the freedom aspect to justify criticism of the rules and requirements for agriculture".

Further research in Sweden also shows that there is indeed a broad public confidence in Sweden, but that it is "cooling" and having large variations within the country. Moreover, this broad political trust is under challenge because of increasing economic inequality as well as increased heterogeneity of people with different lifestyles, cultural expressions or background (Trägårdh & Wallman Lundåsen 2013). This increasing heterogeneity is in part reflected among farmers, especially in light of the altering degree of specialization and diversification. However, all farmers regardless of ideal on what farmers role should be, expresses this broad political trust in social institutions in general, as in that they follow the rules, even if they disagree with the policy behind it. In many international comparisons (see the World Bank 2015) Sweden is characterized, like the other Nordic countries, by a high level of social trust, low corruption and a strong rule of law. Jacobsson (2013) also shows that the general view of society is positive in Sweden and that "Despite the increased individualization there is a broad sense of the common interests and awareness of the collective" (my translation). Among the farmers this is particularly

shown in their approach towards crisis prevention, expressed in similar terms of reciprocity as above:

*“I do not feel such a thing as a duty, if you don’t get someone to pay for it. Or that we are being required to produce. (...) ‘cause that is what they [the authorities] do always – steer us, as now with the EU funds and so on, so I do think that they would steer us in the event of war or crisis ...”*

(Markus och Mikaela, dairy farmers. My translation).

Here, Markus and Mikaela spoke out something that is underlying in all the interviews when it comes to crisis prevention: they trust that the central authorities will take responsibility and decide how to solve a crisis if it gets as bad. Adding to this is also the fact that emergency preparedness for food security has been a non-issue in society for a long time, which spread a sense that it does not need to be worked with on farm level. Furthermore, most of the farmers expressed that they do not see the need to work on preparedness or long-term transitions to less vulnerable production on-farm, since they do not believe the risk for crisis to be impending. More or less directly, the farmers expressed that since central authorities do nothing, it is probably no risk and they don’t have to do anything themselves. This is in a way an expression of trusting the central authorities’ ability to analyse risk, as well as an expression of reciprocity; the logic is that since they do nothing then I do not have to do anything either. Many farmers also believe that the Military still has stocks of fuel, grain and foodstuff, even though they sold those 20 years ago. The Military is also one of the highest trusted institutions in Sweden in general (Weibull and Holmberg 2012) and the farmers political trust seems to follow the trend.

To summarize, despite a low and weakening trust in central authorities for agriculture, the farmers trust the state to be there with a plan if something, against all odds, happens. The combination of these two tendencies of political trust creates what I call a “wait-and-see”-approach to crisis prevention. This result in that farmers do very little to prevent crisis, but when faced with a scenario of crisis, they do potentially see many possibilities to take an active part the day central authorities finds it important enough to work on.

This “wait and see”-approach however, seems to mostly apply to the farmers’ view of their and society’s role and responsibility for national food security in a long-term crisis perspective. In a shorter crisis perspective and in a more local setting, the real life experiences shows that farmers actively take part in the societal crisis management and trust the authorities to do as good as they can, but also recognize that authorities need help from local actors. This is clearly stated by Kristoffer, beef producer in a part of the county where the storm Gudrun hit, drawing from how he acted then:

*“The ones who had machines, we helped out as best as we could. You cannot sit there and wait for someone else to fix it for you, it was a huge job for one day but then we also cleared the roads. (...)That’s how it works in crisis I guess, you have to cooperate. If someone has crisis at home you help out, then I can also count on getting help myself the day it happens to me”*

(Kristoffer, beef producer. My translation).

This expression shows a strong feeling of reciprocity, to help out means that he also can expect to get help himself. This hard work for the whole society as well as for themselves, on public roads, was done without any financial compensation from the state. A neighbour he knows called and he helped out, since he experienced that any help from the rest of society was far away. Kristoffer almost seemed surprised by the question when we ask if he ever tried to get compensation for the work or fuel used from the state or County Board.

This can be seen as a very clear example of local self-organisation of crisis management which is a big research area internationally but only recently studied in Swedish contexts. Building on Landgren (2011), this research indicates that individuals cooperate in crisis management when they experience that there is an acute need for it and when the public emergency doesn’t seem to solve it. Cooperation is particularly likely to occur if local actors see that they can make a difference and if their peers do the same. Locally the resources at hand are used and also new resources created out of improvisation. These spontaneously organised crisis-cooperation groups by local actors have internationally been called “emergent citizen groups” and are characterized by an action-focused and flexible organization (ibid).

It is a key question if the short-time crisis experiences of local self-organisation would make the farmers co-operate even if it comes to planning for years. What we can see in the interviews is

that the farmers that are most positive about their possibilities to create solutions and keep on producing in the longer crisis perspective also are the ones pointing at cooperation as part of the solution. Maike and Marko, dairy farmers who ten years ago were new both to the farming and to the region, have experience of asking and getting help for long time planning. Back then they invited all farmers around to their house and asked about how everything works. When asked now about what they would do to be able to continue to produce as much food as possible for society in a crisis the answer directly relates back to this:

*"I think we would do as we did it then, come together again. And then see what the demand are in the region and try to get us out of the crisis together. So everyone is doing something. I think, you can't do it alone, you can't. "*

(Marko, in interview with him and Maike. My translation).

Further research is needed to examine the role of farmers' local networks for crisis management. What thus is clear from the interviews in this study is that cooperation with central or regional authorities or other actors as retailing companies or the dairies or slaughterhouses is not seen as the main solution among the farmers. In other words the farmers do not experience themselves as being part of a social contract for food, not today nor in crisis.

The two trends regarding farmers' political trust described above seem to result in a gap in the social contract on food security in Sweden. The state's withdrawal and the central authorities' increased focus on cooperation and the role of private actors for crisis prevention and management has not resulted in a growing sense of responsibility among farmers to maintain a food-producing capacity. Neither do farmers experience that there are other actors filling this gap. Rather, in combination with the weakening link between farming and food due to the agricultures new pursuits (in Myrdals terms) this has resulted in that farmers do not see themselves as part in a trust-relation at all on food security today. In other words the social contract on food security is not only changing, it is weakening.



## CONCLUSIONS

The aim of this thesis was to explore farmers' perspective on their and society's role for food security in case of crisis. Here, I aim to summarize the main results and reflect upon the most important findings and what this can mean for the social contract for national food security in Sweden.

The overall main finding can be described as that the social contract on food security is weakening. This is explored in three main themes: the two ideals on farming and farmers, the weakening link between farming and food, and the two tendencies on political trust among farmers. Firstly, how farmers view their role in society is strongly influenced by two ideals on farming: a lifestyle and a business. This is related to by all farmers, to varying degrees. Both ideals can be expressed by the same farmer, but many seem to identify more with the one or the other. The farmers influenced more with the lifestyle ideal on farming express strong bonds to a specific farm or production type, which creates a dedication to find solutions to continue with that specific production or at the specific farm, even if the conditions change drastically. The lifestyle ideal also means valuing the practical work in itself, which means that many farmers are developing deep knowledge and skills on different ways of producing which could be of great importance for crisis management as well as prevention. The farmers strongly influenced by the businessman farmer ideal have fewer bonds to a specific farm or production type, which creates flexibility which in a crisis perspective means openness towards radical changes and new ways of production types and methods. However, the businessman-farmer ideal strongly emphasize the market-logic which means that other businesses soon is considered if the profitability of farming is weak. Both ideals motivate what I call a "lets solve it"-attitude towards challenges.

Secondly, the farmers' role as food producers in society is changing. In today's politics and by society in general agriculture is rather valued for its landscape management or recreational services, or in terms of environmental issues, than in terms of food production. The farmers are therefore both experiencing a weakening link to food production in the societal and medial picture of agriculture, as also themselves expressing this. However, most farmers found it to be the right, or rightful, role for agriculture to produce food, even though this role is weakening.

Thirdly, there are two main tendencies regarding farmers' political trust related to crisis prevention and -management. Most striking, the farmers trust on central authorities of

importance for agriculture is low; the farmers feel that the authorities not are working with integrity or based on farmers values. Regarding society's crisis management the farmers' political trust is comparatively higher, but seems to be "cooling", following a general trend among Swedish citizens. These two tendencies are resulting in a feeling of low responsibility for food security which can be understood in terms of reciprocity; since the society do not appreciate farming for its food-producing role, and since the state do nothing on crisis-planning in relation to the on-farm production, the farmers do not feel that they should or even could work with crisis planning or -prevention. This way farmers relate to their and society's role for crisis management with what I call a "wait-and-see"-approach. The state will need to take the first step if farmers are to take an active role for food security.

In the light of the long history of peace and wealth in Sweden, combined with the ideals on farming and the weakening link to food production on farm as described above, I do not find it surprising that the farmers express this somewhat ambivalent political trust and low interest in crisis prevention. For policy-making and national security work addressing food security and potential cooperation with farmers however, I think it is vital to understand the underlying ideals and logics that create this "wait-and-see"-approach. For policy makers or state authorities aiming to develop crisis cooperation with farmers, these two ideals on farming and the somewhat hidden potential they bring for crisis prevention could be useful to address different farmers in a more adequate way. For crisis cooperation to be efficient, it is – as stated early in this thesis – important that all actors experience that they are part of a trust-relation and have joint responsibility. This does not seem to be the case with farmers since there is a gap in the social contract on food security, even though farmers are the ones taking the on-farm decisions over food production. This I argue to be problematic for national food security in case of longer-term crisis, since it means no joint effort is being done on the prevention of crisis or planning for crisis management together with farmers. Besides the hidden potential for crisis management in farmers "lets-solve-it"-attitude, flexibilities and long since developed skills and knowledge, there seem to be possible solutions for crisis management and cooperation in the farmers' local network and still thriving cooperation practices. This local cooperation and more horizontal societal trust between citizens has not been the focus in this thesis, however the results indicate an interesting area where further research would be needed.

## REFERENCES

- Andersson, I. & Brorsson, K.-Å. (1991). *Jordbrukets sårbarhet nu och för 50 år sedan. En studie på gårdsnivå utförd 1990*. ALA-Arbeitsgruppen lantbruk och samhälle, Rapport 1. Sveriges lantbruksuniversitet, Alnarp.
- Ashley, C. & Maxwell, S. (2001). *Rethinking Rural Development*. *Development Policy Review* 19 (4): 395-425.
- Baky, A., Widerberg, A., Landquist, B., Norberg, I., Berlin, J., Engström, J., Svanäng, K., Lorentzon, K., Cronholm, L.-Å., Pettersson, O. (2013). *Sveriges primärproduktion och försörjning av livsmedel – möjliga konsekvenser vid en brist på tillgänglig fossil energi*. Institutet för jordbruks- och miljöteknik. JTI-rapport 2013, Lantbruk & Industri nr 410.
- Berkes, F. (2007). *Understanding uncertainty and reducing vulnerability: lessons from resilience thinking*. In *Natural Hazards*, journal, Vol. 41:2, pp 283-295.
- Björnberg, A. (1946). *Hur Sverige ordnade folkförsörjningen under andra världskriget: männen och kvinnorna bakom verket*. Referenslitteratur, Kungliga skogs och lantbruksakademien.
- Civilförsvarsförbundet (undated). *Vad du behöver veta för att klara av en samhällskris*. <http://www.72timmar.se/> [2016-05-10].
- Dahlstedt, M., Rundqvist, M. & Vesterberg, V. "Medborgarskap - rättigheter, skyldigheter och medborgarideal i förändring". I: Dahlstedt, M. & Neergaard, A. (ed.) (2013). *Migrationen och etnicitetens epok: kritiska perspektiv I etnicitets- och migrationsstudier*. Stockholm: Liber.
- European Commission (2013). *Overview of CAP Reform 2014-2020*. Agricultural Policy Perspectives Brief, No 5.
- European Parliament, Committee in Internal Market Economic and Consumer Protection (2015). *Unfair Trading Practices in the Business-to-Business Food Supply Chain – Proceedings of the Workshop*. Brussels, 24 March 2015. Available at: [www.europarl.europa.eu/supporting-analyses](http://www.europarl.europa.eu/supporting-analyses)
- Eur-Lex, Access to European Union law. (2016). "Solidarity clause". [http://eur-lex.europa.eu/summary/glossary/solidarity\\_clause.html](http://eur-lex.europa.eu/summary/glossary/solidarity_clause.html). [2016-05-01].
- Eriksson, C. (forthcoming). "Jordbrukspolitiken: Från överproduktion till bristande självförsörjning". In: *Svensk politik och EU*. Daniel Silander & Mats Öhlén (Eds). Stockholm: Santerus.
- Flygare, I. A. och Isacson, M. (2003). *Jordbruket i välfärdssamhället. 1945-2000*. Örebro: Natur och kultur/LTs förlag.
- Försvarshögskolan, FHS (2016). *Samhällssäkerhet och civilt försvar i livsmedelskedjan och jordbrukssektorn*. Institutet för högre totalförsvarsutbildning. Rapport 261/2015.

Granvik, Madeleine (2013). Interaktion mellan stad och land i fysisk planering. Lokalisering för livsmedelssystem i Sveriges kommuner. In: Rytkönen, Paulina; Bonow, Madeleine och Wramner, Per (ed.) 2013. *Från matproduktion till gastronomi*. Södertörns högskola, COMREC Studies in Environment and Development.

Holmberg, Sören & Weibull, Lennart (2013). "Det viktiga institutionsförtroendet". In: Lennart Weibull, Henrik Oscarsson & Annika Bergström (ed) *Vägskäl*. Göteborgs universitet: SOM-institutet.

IFAD (2013). *Smallholders, food security and the environment*. International Fund of Agricultural Development. Available at: <https://www.ifad.org/documents/10180/666cac24-14b6-43c2-876d-9c2d1f01d5dd>.

Jacobsson, K. (ed.) (2011). *Känslan för det allmänna: Medborgarnas relation till staten och varandra*. Stockholm: Boréa bokförlag.

Jordbruksverket (2015). "Jordbruksverkets ansvar vid kris". <http://www.jordbruksverket.se/omjordbruksverket/krisberedskap/jordbruksverketsansvarvidkris.4.3a2bcf1b1244c6487a480001810.html>. [2016-05-17]

Kvale, S. & Brinkmann, S. (2015). *InterViews. Learning the Craft of Qualitative Research Interviewing*. 3d ed. SAGE Publications, Inc.

Landgren, J. (2013). "Spontan organiserad samverkan kompenserar för de centrala aktörernas misslyckande". In: MSB 2011. *Samverkan för säkerhets skull*. Swedish Civil Contingencies Agency. Available at: <https://www.msb.se/RibData/Filer/pdf/25963.pdf>

Lantbruksstyrelsen (1991). *Jordbrukets blockorganisation*. Jönköping: Lbs Offset.

Larsson, A. (2004). *Landskapsplanering genom jordbrukspolitik – en kritisk granskning av EU:s agrara miljöstödpolitik ur ett planeringsperspektiv*. Acta Universitatis Agriculturae. Institutionen för landskapsplanering, Swedish University of Agricultural Sciences, Alnarp.

Lichbach, Mark Irving (1997). *The Cooperator's dilemma*. Michigan: The University of Michigan press.

Lindensjö, Bo (1996). *Liberalismen och den moderna demokratin*. Lund: Studentlitteratur.

Livsmedelsverket (2016). "Livsmedelsförsörjning vid kris". <http://www.livsmedelsverket.se/om-oss/krisberedskap/livsmedelsforsorjning-vid-kris/>. [2015-05-05].

Livsmedelsverket, (odaterad). *SRSA: sektorsövergripande risk och sårbarhetsanalys. En metodutveckling med utgångspunkt i livsmedelskedjan*. I samarbete med Statens veterinärmedicinska anstalt (SVA) och Jordbruksverket.

LRF, Swedish Farmer Organisation (2010). "Mer och mer mat importeras". In: *Internationella perspektiv*, Nr 18, 11 June 2010. Newsletter.

McCormick, J. (2008). *Understanding the European Union – A concise introduction*. New York: Palgrave Macmillan.

Milestad, R., Dedieu, B., Darnhofer, I. & Bellon, S. (2012). "Farms and farmers facing change: The adaptive approach". In: *Farming systems Research into the 21<sup>st</sup> Century: The New Dynamic*.

MSB, Swedish Civil Contingencies Agency (2014). "Detta gör samhället". <https://www.krisinformation.se/detta-gor-samhallet>. [2016-04-11].

MSB, Swedish Civil Contingencies Agency (2015). "Civil Emergency Planning/Crisis Management in Sweden". <https://www.msb.se/en/About-MSB/Crisis-Management-in-Sweden/>. [2016-05-11].

MSB, Swedish Civil Contingencies Agency (2016). "Samhällsviktig verksamhet". <https://www.msb.se/Templates/Pages/AreaStartPage.aspx?id=7972&epslanguage=sv>. [2016-05-05].

Myrdal, J. (2001). *Den nya produktionen – det nya uppdraget (Jordbrukets framtid i ett historiskt perspektiv)*. Näringsdepartementet. Ds 2001:68.

Nordström Källström, H. (2008). *Mellan trivsel och ensamhet – om sociala villkor i lantbruket*. Acta Universitatis Agriculturae Sueciae vol. 2008:74, Sveriges lantbruksuniversitet, Uppsala.

Norén Bretzer, Ylva. (2005). *Att förklara politiskt förtroende. Betydelsen av socialt kapital och rättvisa procedurer*. Filosofie doktorsexamen i statsvetenskap. Statsvetenskapliga institutionen. Göteborgs universitet.

O'Brien, K., Hayward, B. and Berkes, F. (2009). *Rethinking Social Contracts: Building Resilience in a Changing Climate*. In: Ecology and society 14 (2): 12. Available at: <http://www.ecologyandsociety.org/vol14/iss2/art12/>

Olofsson, A. och Öhman, S. (2009). *Risker i det moderna samhället: Samhällsvetenskapliga perspektiv*. Lund: Studentlitteratur.

Olsson, O. (2013). *Det nya samhällskontraktet*. In: Ekonomisk Debatt 2013:4, s. 43-53. Göteborgs universitet: Institutionen för nationalekonomi med statistik. Available at: <http://www.nationalekonomi.se/sites/default/files/NEFfiler/41-4-oo.pdf>

Putnam, R. (1993) *Making Democracy Work: Civic traditions in modern Italy*. Princeton: Princeton University Press.

Regeringens beslut 11:16. 2015-12-10. *Planeringsansvisningar för det civila försvaret*. Stockholm: Justitiedepartementet.

Regeringens proposition 2007/08:92 *Stärkt krisberedskap – för säkerhets skull*. Stockholm: Regeringskansliet.

Regeringens proposition 2014/15:109. *Försvarspolitisk inriktning - Sveriges försvar 2016-2020*. Stockholm: Regeringskansliet.

Rose, N. (1999). *The governing of the soul: Shaping of the Private Self*. 2d ed. London: Free Association Books.

- Rothstein, B. (2005). *Social traps and the problem of trust*. Cambridge University press.
- Rothstein, B. & Teorell, J. (2012) Defining and measuring quality of government. In Holmberg, S, Rothstein, B, (Eds.) *The Quality of Government. Corruption, Social Trust and Inequality in International Perspective*. Chicago: University of Chicago Press.
- SCB (2014). *Jordbruksstatistisk årsbok 2013: med data om livsmedel*. Örebro: Statistiska centralbyrån.
- SCB (2015). *Statistikskolan: Urbanisering – från land till stad*. <http://www.scb.se/sv/Hitta-statistik/Artiklar/Urbanisering--fran-land-till-stad/#> [2016-05-05]
- SIK. Institutet för Livsmedel och Bioteknik (2014). *Hållbara matvägar – resultat och analys*. SIK-rapport 891. I cooperation with the Swedish University of Agricultural Sciences (SLU) och Jordbrukstekniska institutet (JTI).
- Teorell, J. & Svensson, T. (2007). *Att fråga och att svara. Samhällsvetenskaplig metod*. Malmö: Liber.
- The World Bank (2015). *World Governance Indicators*. <http://info.worldbank.org/governance/wgi/index.aspx>. [2016-04-15].
- Trägårdh, L. (ed.) (2009). *Tillit I det moderna Sverige. Den dumme svensken och andra mysterier*. Stockholm: SNS förlag.
- Trägårdh, L., Selle, P., Skov Henriksen, L. och Hallin, H. (ed.) (2013). *Civilsamhället klämt mellan stat och kapital. Välfärd. Mångfald. Framtid*. Stockholm: SNS Förlag.
- Trägårdh, L., Wallman Lundåsen, S. (2013). *Den svala svenska tilliten: Förutsättningar och utmaningar*. SNS Förlag.
- Tyler, T. R. (2001). *Public trust and confidence in legal authorities: What do majority and minority group members want from the law and legal institutions?* Behav. Sci. Law, 19: 215–235
- Tuler, S., Agyeman, J., da Silva, P., LoRusso, K., Kay, R. (2008). *Assessing vulnerabilities: Integrating Information about Driving Forces that Affect Risks and Resilience in Fishing Communities*. In: Human Ecology Review, Vol 15, No. 2, 2008. Available at: <http://www.humanecologyreview.org/pastissues/her152/tuleretal.pdf>
- Weibull, S. & Holmberg, L. (2013). *Förtroendet för samhällets institutioner. Utvecklingen i Sverige 1986-2012*. SOM-institutets temaserie 2013:1.
- World Health Organization, WHO (2016). “Food Security”. <http://www.who.int/trade/glossary/story028/en/>. [2016-04-27]

## APPENDIX 1. THE FARMERS INTERVIEWED

Anonymous name	Main production type	Size	Arable land total (ha)	Organic	Approx. age
Kristoffer	Beef	Part time	20- 30		40
Karin, Kalle, Kajsa	Pig, sheep, egg	Hobby	0-5	Yes	40, 20, 40
Micke	Dairy	Commercial	300-400		50
Magnus	Dairy	Commercial	300-400		60
Mats	Dairy	Commercial	50-100	Yes	60
Malin	Dairy	Part time	5- 10		50
Mikaela, Markus	Dairy, beef	Commercial	100-200		40
Marko Maaikie	Dairy	Commercial	100-200	Yes	40
Birgitta	Broiler	Commercial	300-400		65
Benny	Broiler, egg and horticulture	Commercial	200-300		40
Bengt	Broiler	Commercial	200-300		50
Verner	Grain production, horticulture	Commercial	400-500	Yes	60
Veikko Vera	Grain production	Commercial	100-200		65, 70
Viola Viktor	Grain production	Part time	20- 30	Yes	65, 70
Vilhelm	Grain production	Commercial	500-		50
Torgny Tobias	Potato and grain production	Commercial	300-400		70, 30
Gustav	Pig, integrated production	Commercial	400-500		50
Gunnar	Piglet production	Commercial	50-100	Yes	50
Tina	Horticulture, grain production	Commercial	50-100		65
Torbjörn	Horticulture	Commercial	5-10	Yes	50

## APPENDIX 2. INTERVIEW TEMPLATE



### FARM PRODUCTION TODAY

- Production type and size, revenue, labour, ownership etc...
- Economy, in-and out flows of goods and inputs
- Farm history: latest 5-10 and 25-30 years?
- Goals today? What happens next, and after you?



### DEPENDENCIES

- Inputs: fodder, fertilizers, fuels, seeds, etc...
- Machinery, what types and how much fuel is used per use?
- Infrastructure (electricity, water, heat and ventilation, IT)
- Immaterial (i.e. knowledge, contracts etc.)



### DISTURBANCE/SHORT-TERM CRISIS

- The factors identified as dependencies - what would happen with them?
- Experiences from crisis before?
- Power failure, delivery or transport stops, inputs shortage...
- Time of the year
- If animals - what happens to them?



### FOOD SUPPLY AND SECURITY

- Do you produce for foods? Is it important that you produce food? Anything ready to consume without processing? Would you be able to if needed?
- Where does the products go today? Does it matter to you where it goes?
- Your role for food security locally in case of disturbance or crisis? What could this farm produce? Whom do you think will take the responsibility for peoples food supply?



### NETWORK

- Where do you find inspiration? Social media, newspaper, organizations, colleagues? Experts/advisors?
- Decision making - by yourself or together with whom?
- Are there any conflicts in the local community or among neighbours?
- Societys' views on farming and agricultures role
- Relation with central authorities and local administration



### TRANSITION/LONG-TERM CRISIS

- What could you and this farm produce? What inputs would be hardest to replace to continue produce anything?
- Crisis prevention and management - what is your responsibility?
- What can you do in crisis? What would you expect "the society" to do? Whom do you trust for crisis management?