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# **‘Good Farmer’ Values and How They Affect the Path to a Sustainable Agriculture**

A study of ‘good farmer’ values at Gotlandic conventional farmers and how these values affect the path to a sustainable agriculture

**Mette Tiselius**

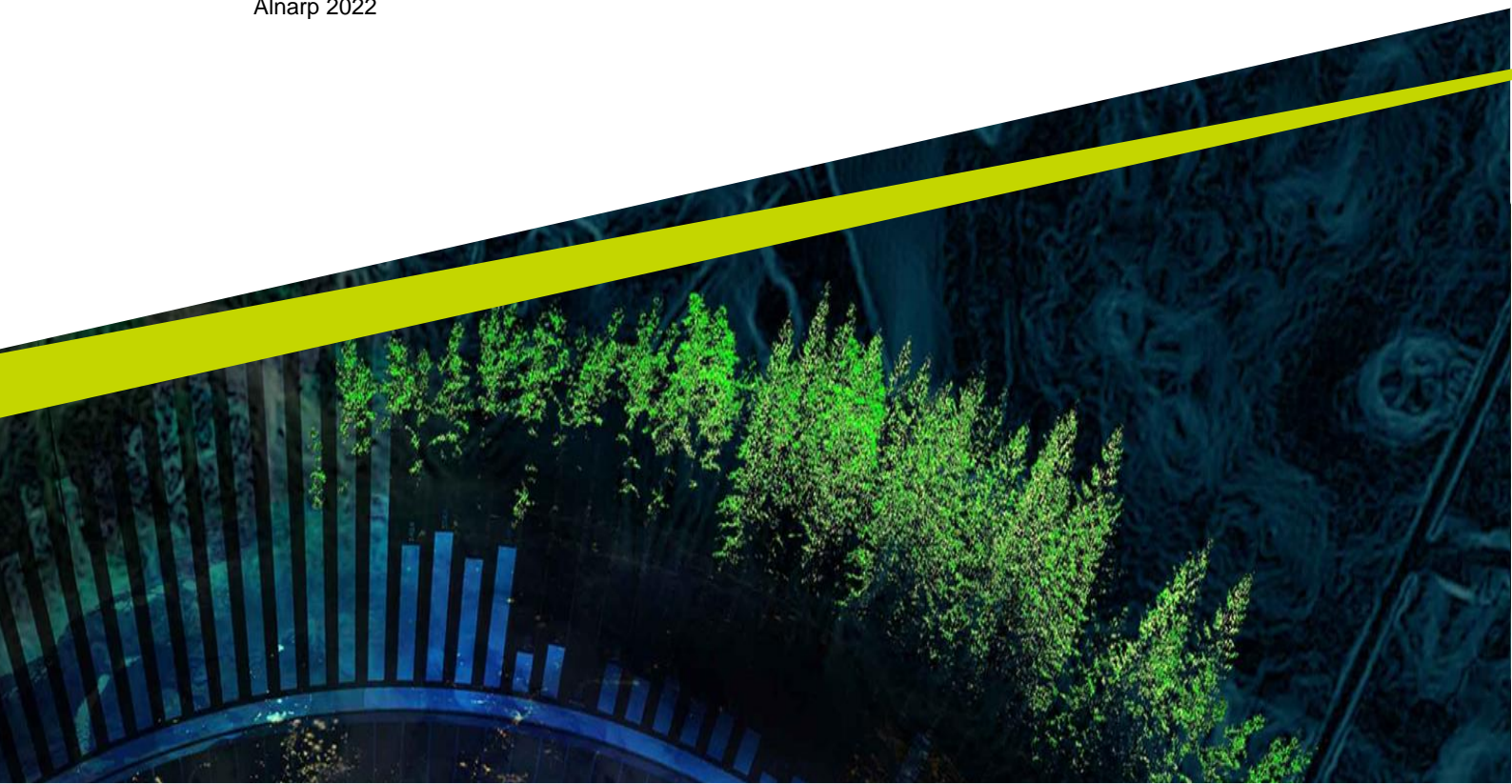
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Swedish University of Agricultural Sciences, SLU

Faculty of Landscape Architecture, Horticulture and Crop Production Science

Agroecology

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# 'Good Farmer' Values and How They Affect the Path to a Sustainable Agriculture

A study of 'good farmer' values at Gotlandic conventional farmers and how these values affect the path to a sustainable agriculture

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## **Abstract**

Conventional agriculture is unsustainable on several levels and therefore a change has to take place. This study focuses on the central 'good farmer' values of conventional farmers and how these values affect the path to a sustainable agriculture. An analysis of 'good farmer' values of conventional farmers was carried out on the basis of a literatur study and interviews with conventional Gotlandic farmers. The analysis showed that some of these values conflicted with sustainable agriculture, while others did not. It was mainly the visible symbols of being a 'good farmer' that inhibited the implementation of sustainable practices along with the small economic margins most conventional farmers have. The study concludes that 'good farmer' values can be a key element in the change of conventional agriculture, if these values are shifted towards sustainable ones. This shift can be facilitated by establishing new social contexts for the farmers and changing the structures of the current food systems.

*Keywords:* conventional farmers, good farmer, cultural capital, sustainable agriculture, agroecology

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Last but not least, thank you to my family and friends for supporting me and inspiring me.

We shaped this landscape, and we were shaped by it in turn. My people lived, worked and died down there for countless generations. It is what it is because of them and people like them. It is, above all, a peopled landscape. Every acre of it has been defined by the actions of men and women over the past ten thousand years.

James Rebanks in *The Shepherd's Life* (2015)

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## **Introduction**

I entered the agroecology programme at SLU<sup>1</sup> in the fall of 2020. In the first course we went on a field trip to the nearest conventional farmer. The visit showed great contrasts to the type of agriculture we learned about in our lectures. Two full-time workers were responsible for the cultivation of 500 hectares. The farm buildings were mostly empty except for the storage of artificial fertilizers, imported seeds and big tractors. As the farmer in charge explained the production system, it became clear that he worked very much for a small paycheck. He proudly told us conventional farmers were ‘feeding the world’, yet his own produce was sold to Absolute Vodka or shipped off to a global market. To me, that farm had been deprived of life; there was no livestock, no social life and no connection to the local community. It was clear that the farmer was just trying to keep the farm alive. I found the whole visit to be a sad experience. Why was this farmer so critical towards more sustainable farming? Didn’t he want more life on his own farm? What happened to the idea of an independent farmer who takes care of his/her land and feeds his/her community? As the program went on, more examples of this kind of farmer appeared in articles, public debates as well as in lectures. While we learned about how agroecological practices provided benefits for farmers, communities and the environment, conventional farmers criticized almost all policies which required them to implement sustainable practices. We neither learned very much about how conventional farmers can change their practices, despite the fact that they constitute the majority of farmers in Sweden. It seemed as though the conventional farmers resisted change, although the current food system did not generate many benefits for the farmers themselves.

This thesis aims to give an insight into the values and worldviews of conventional farmers in the Global North (henceforward only called conventional farmers). A deeper understanding of elements such as values, narratives and identity can help to explain some of the ways that conventional farmers behave, and why they generally resist implementing sustainable practices. Furthermore, it can provide tools to reduce this resistance and design agricultural policies which are both environmentally and socially sustainable. Since farmers are the backbone of agriculture, they have to be actively engaged in the change of it. Listening to their stories is an important step in this process.

### **The need of a sustainable agriculture**

The world is facing a number of ecological crises: Massive loss of biodiversity, climate change, disrupted nitrogen and phosphorus cycles, destruction of natural habitats, chemical pollution and so on (Rockström et al. 2009). Many of these crises are caused by or linked to industrial agriculture. This type of agriculture is characterized by a maximization of production and profit. Production systems in industrial agriculture are generally based on a high input (fertilizer, pesticides, fossil

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<sup>1</sup> Master programme at SLU, which focuses on sustainable food systems.



fuels, minerals, etc.) which generates a high output. They are specialized systems, meaning that they mainly produce either grain, vegetables, meat or dairy. The agricultural landscape is generally monocultural and requires intensive tillage and pesticide use (Gliessman 2015; IPES 2016). Most farmers in industrial agriculture are conventional, although organic industrial productions do exist. This thesis focuses on conventional farmers and will henceforth use the term ‘conventional agriculture’ instead of ‘industrial agriculture’. The high outputs of conventional agriculture come at the price of a long list of negative effects on the global environment: Pesticides have contaminated waterways, intensive tillage has led to soil erosion, fertilization has caused disrupted nitrogen and phosphorus cycles and grazing livestock demands more land usage which causes destruction of natural habitats (Gliessman 2015; IPES 2016). This is just a few examples of many. Although Swedish agriculture may not face as severe effects of conventional agriculture as in e.g., USA, there are still negative effects to be found. Biodiversity is decreasing, pesticides are found in drinking water, water streams are in poor ecological condition due to overfertilization, and so on (Naturvårdsverket 2021). The Baltic Sea, where Gotland is located, is suffering from the ecological consequences of overfertilization from agriculture in the countries that surround this sea (Länsstyrelsen i Gotlands Län 2021). Simultaneously, conventional agriculture is destroying the foundation it is based upon. According to IPES (2016), the practices of conventional agriculture cause a destructive circle. Overapplication of nutrients (manure, fertilizers, minerals), high chemical inputs, aggressive soil tillage, intensive water usage and high densities of livestock result in some of the following processes: Soil erosion, reduced water-holding capacity, soil and water contamination, destabilization of water cycles and salinization. These processes threaten agricultural productivity and lead to land degradation and loss of biodiversity (which also increases the threat to productivity). A threat to productivity requires further intensification of the practices which caused the destructive processes in the first place. The foundation of conventional agriculture is thereby destroyed at an increasing rate.

Despite these negative aspects, conventional agriculture continues to be pursued. It is usually argued conventional agriculture is the only way to ‘feed the world’ due to the high productivity in conventional production systems. Pesticides protect agricultural crops from pests and diseases, and are therefore seen as a way to secure yields and food supply (Jordbruksverket 2022a). The technology, practices and inputs of conventional agriculture enable uniform crops, which are well adapted to e.g., packaging and consumer demand (IPES 2016). The conventional agricultural sector also provides jobs for a large number of people and can bring in billions in exported produce. In 2017 Sweden exported agricultural produce for 83,7 billion SEK (Jordbruksverket 2018). Alternative production systems can of course also export its produce, but it is currently not adapted to global trading systems (e.g., the produce can vary in shapes and sizes, the yields are more unreliable and generally not in the volumes required to be exported globally) (Gliessman 2015; IPES 2016). All these arguments are used to defend conventional agriculture, and they do have valid points. However, they can also be questioned from different perspectives, which will be shown later in this thesis.

The negative aspects of conventional agriculture are nonetheless severe, and they pose a threat to the very foundation of agriculture. Therefore, fundamental changes in current agriculture have to take place. Alternative agricultural systems have the ability to reduce or even eliminate some of the ecological crises we are facing. For example, agricultural fields can function as carbon sinks, and diverse agricultural systems can increase biodiversity. The need to reduce the negative effects of conventional agriculture has been evident for several decades and can be seen in e.g., ban of certain pesticides or strict rules for fertilization. However, the beneficial multi functionality of alternative agricultural systems and their ability to mitigate ecological crises have begun emerging recently. The two factors have caused agricultural policy changes on a national and global level. Swedish agricultural policies are designed and implemented in accordance with the common agricultural policy of the EU (also called CAP). Since the 1980'ies, farmers in the EU have been able to receive subsidies through e.g., agri-environmental schemes (AES) or 'greening' of their practices. Examples of such practices can be diversifying crop rotation, having permanent grassland, or converting to organic production (European Commission 2022a). The idea of these subsidies was to give the farmers an economic benefit or compensation for making their production more sustainable. However, the farmers have generally not responded well to the idea of changing agricultural practices. Cultural or ecological outcomes of policies or AESs have been small or even absent (Burton 2004; Burton and Paragahawewa 2011; Jordbruksverket 2011a; Saunders 2015).

### **Resistance and negative response of European farmers**

Studies conducted in Europe and Australia during the 1990'ies and 2000s showed little effect of AESs. It seemed as though the schemes failed to bring ecological improvements and change the behaviors of farmers. The practices of the AESs did not become embedded in the farmer culture (Burton et al. 2008; Burton and Paragahawewa 2011). Although awareness of environmental issues has increased, farmers still seem highly skeptical of implementing more sustainable practices. When a new policy concerning field edges was executed in Denmark in 2011, it caused massive protests from Danish farmers for several years (Kirkegaard 2014). The potential ban on glyphosate, which has been discussed the last couple of years, has led to harsh criticisms from farmers and farmers organizations (Johansson 2020; LRF 2021a). A study by Saunders (2015), showed the mindset of Swedish conventional farmers had hardly been affected by policies such as AESs. Saunders (2015, p. 404) states that:

Despite the policy emphasis on moving to a multifunctional agriculture over the past 20–25 years in Sweden, notions of productive value among conventional farmers still seem to exclude environmental action that does not directly benefit what is seen as the core purpose of farmers – to grow, cultivate or produce food and fodder efficiently.

What causes this continuous resistance? The reason for it cannot only be economic losses, since farmers in the CAP often are compensated for losses through the subsidies. An increasing number of researchers believe the resistance is caused by more personal elements of the farmers. Their values, worldviews and social norms shape how they behave, and how they respond to changes. Farmers are, as all people, social beings and they are greatly affected by the norms of this social

group. Practices or policies, which are not in line with the norms and values of the group, will be met with considerable resistance and even counteracted. Although conventional farmers are a diverse group of people, they generally share a number of values and norms, since they are guided by the same productivist mindset (Burton et al. 2021).

### **The ‘good farmer’ concept**

Burton (2004) coined the term ‘the good farmer’ (GF). It is a sociological concept which aims to identify central values and norms among farmers concerning their identity, ideals and social relations. What exactly constitutes a GF will differ depending on the community, but one can see it as a standard which farmers compare themselves and others to. Farmers will strive to be GFs, since it strengthens their social networks and their position in these. By showing certain symbols of GF to the community, (e.g., ploughing skills or tidy fields) farmers can accumulate GF-capital and earn respect from other farmers. However, if farmers fail to show these symbols, they will be seen as ‘bad farmers’ and lose social status in the community (Burton et al. 2021). The GF-concept is a useful tool to clarify the values and norms in farming communities and thereby create an understanding of farmer behavior. This is necessary in order to understand the resistance which farmers show towards sustainable practices, and how this resistance can be reduced.

Gotland is a Swedish region with a strong connection to agriculture. Agriculture can be traced several thousand years back, and it has shaped parts of the diverse landscape on Gotland. A diverse group of farmers are found on Gotland and agriculture remains vital for jobs, tourism and rural communities on the island (Region Gotland 2017). Due to its status as an agricultural region and isolation as an island, Gotland offers an interesting frame for research of farmer behavior and values.

### **Research question**

The aim of this thesis is to give an insight into the central values and worldviews of conventional farmers, and to understand how these values affect the path to a sustainable agriculture. The thesis is framed by the GF-concept and intends to answer the following research question:

*What constitutes a ‘good farmer’ for conventional farmers on Gotland, and how does this affect the path to a more sustainable agriculture?*

My hypothesis is that the practices used by conventional farmers on Gotland are closely linked to their identity, and what they believe to be a GF. To them, sustainable practices are generally associated with ‘bad farming’ and thereby a loss of social status and identity. This generates a resistance towards these practices. In order to achieve a sustainable agriculture as defined by agroecologists, a shift in norms and values of the farmers has to take place. Sustainable values and symbols of a GF are important steps on the path to a sustainable agriculture.

### **Thesis outline**

The thesis is structured in the following way. First, a definition of a sustainable agriculture is presented in order to clarify what ‘sustainable’ means in this thesis. Then, the GF-concept is presented as the theoretical framework. This is followed by a presentation and discussion of the used methodology of the literature study and interviews. In order to understand the context of the Gotlandic farmers, a short description of influencing factors in their context is given. Then, an analysis of the GF-values of the Gotlandic farmers and their views’ on sustainability is carried out. The analysis is continued by showing how the GF-values affect the implementation of sustainable practices. This leads into a discussion on how GF-values can be change towards more sustainable ones. Finally, recommendations on how to change GF-values and structures in the current food system are given.

## **Definitions**

### **Sustainable agriculture according to agroecology**

The word ‘sustainable’ is used in a lot of different ways nowadays, and the definitions of a sustainable agriculture change depending on who you ask. However, the following definition will be based on some of the most influential writers within agroecology. Henceforward, when the terms ‘sustainable agriculture’ or ‘sustainable practices’ are used, they refer to this definition or practices used in this type of agriculture.

It is important to remember that agroecology does not ‘preach’ for one type of agricultural systems or practices. Instead, a diversity of those are encouraged since the agricultural systems have to be adapted to local conditions. Agroecology provides farmers with general principles and elements which they can design their agricultural system from. There are no easy ‘step-by-step’ guides, since ecological, social and economic conditions vary greatly in the world.

Sustainable agriculture is sustainable within the ecological, social and economic spheres of agriculture.

- Within the ecological sphere, a sustainable agriculture is one which is adapted to the local biological conditions and aims to start or sustain processes which affect nutrient cycling, soil organic matter, biotic pest regulation and water conservation in a positive way. This enhances soil fertility, increases productivity, improves plant health and makes the whole agrosystem more resilient (Nicholls et al. 2017). There is a high level of circular processes and thereby low inputs and outputs. Diversity is a key element and can be seen in crop rotations, applied practices and in the number of species (crops, insects, birds etc.). Polycultures, no-till, mulching and agroforestry are just some examples of practices which can be used (Gliessman 2015). The agrosystem has minimal negative effects on the environment (locally and globally) and can help to mitigate and adapt to climate change. The agrosystem is multifunctional and provides a range of services, not merely producing food.

- Within the social sphere, sustainable agriculture is one that ensures food security in a way that is culturally appropriate and benefits both producers and consumers. There are short supply chains and thereby a much closer connection between the producers and consumers (IPES 2016). This close connection enables both parties to establish a relational approach towards each other and their products, which minimizes the risk of alienation of producers and farmers. Local control of agricultural resources is a key element, and therefore a sustainable agriculture aims towards guaranteeing equal access to appropriate practices, knowledge and technologies within agriculture. Social relations are a key factor in a sustainable agriculture and constitute contexts of meaning and belonging. A diversity of diets, people and voices are encouraged within the food system as opposed to uniformity (Gliessman 2015). Sustainable agriculture is adequate to feed the world's population and can do this in an equal and just way (IPES 2016).
- Within the economic sphere, sustainable agriculture is one where food is highly valued, and producers are paid a fair price for their products. In order to make their economy more resilient, producers often have a variety of products, which they sell through short supply chains (e.g., local markets, CSAs, farm shops etc.) (IPES 2016). Employees within agriculture are paid a fair salary, and they work under safe conditions. Since sustainable agriculture is much more labour intensive than conventional agriculture, there is a higher rate of employees which is beneficial for rural communities. Sustainable agriculture generates financial resources which circulate in communities instead of simply flowing through.

Although some of these elements can seem utopian, an increasing number of studies show that agroecological agriculture can feed the world's population and meet these criteria for sustainability (Holt-Giménez et al. 2012; Gliessman 2015; IPES 2016; Nichols et al. 2017). However, it will not be an easy task to change current agricultural systems towards this kind of sustainability that have been defined here.

## **Theoretical framework**

The theoretical framework for this thesis is mainly constituted by the GF-concept. Yet, in order to understand some of the driving forces behind the GF-values examined in this thesis, concepts presented by Bell (2004) and IPES (2016) are also included in the theoretical framework.

### **The GF-concept**

The foundation of the GF-concept is social scripts and symbols that farmers use in order to distinguish whether they themselves or others are GFs. Exactly what it means to be a GF varies a lot depending on the context of the farmers. For example, conventional farmers and organic farmers have different notions of what it means to be a GF. Agricultural landscapes and cultures are full of symbolic meanings associated with the performance of certain agricultural skills (Burton et al.

2021). How these symbols are interpreted depends on which GF-values the farmers have. Conventional farmers generally see monocultural tidy fields as a symbol of being GF, whereas organic farmers might value more diversity in their fields. Farmers who can show the ‘right’ symbols in their agricultural landscape will be considered GFs. Those who fail will be considered ‘bad farmers’ and risk losing social status within the community. Symbols of GF may change over time, and sudden shifts are rare. Not only farmers themselves define GF-symbols, but also actors like consumers, politicians, biologists, Big Ag, etc. are involved (Burton et al. 2021). Being able to identify these symbols and social scripts can help us understand farmers’ decision-making and behavior. Table 1 below shows examples of GF-symbols for different types of farmers.

*Table 1. Examples of GF-symbols for different types of farmers.*

| Types of farmers | Symbols of GF  |
|------------------|--|
| Conventional     | <ul style="list-style-type: none"> <li>- Tidy fields</li> <li>- No weeds</li> <li>- Straight lines</li> <li>- Heavy machinery</li> <li>- Hard work</li> <li>- High yields</li> <li>- Specialized production</li> <li>- Healthy, uniform crops</li> <li>- Monocultures</li> </ul>       |
| Organic          | <ul style="list-style-type: none"> <li>- Tidy fields, but weeds accepted to a certain degree</li> <li>- Diversity in crops, varieties and breeds</li> <li>- Diversified production</li> <li>- Flower strips</li> <li>- Polycultures and monocultures</li> <li>- Cover crops</li> </ul> |
| Permaculture     | <ul style="list-style-type: none"> <li>- Highly diverse production</li> <li>- Circular shapes</li> <li>- Polycultures</li> <li>- Biodiversity and diversity of crops, species and breeds</li> </ul>  |

### **A sociological concept**

GF is a concept that is developed by social scientists during the last fifteen years. Rob Burton coined the term in 2004 in his paper ‘Seeing through the ‘good farmers’ eyes: Towards developing an understanding of social symbolic value of ‘productivist behaviour’. Prior to this article, there had

been a growing interest in agricultural studies on how to identify farmer behavior in regard to decision making. The reason was the resistance farmers within the EU showed towards the AESs and diversification schemes introduced during the 1980'ies and 1990'ies. Despite economic benefits, farmers were unwilling to change their agricultural practices. It seemed to hit a very personal note for the farmers, when the schemes demanded them to diversify their production (e.g., plant trees), and some argued that they were 'farmers, not foresters'. During the 1990'ies agricultural studies showed that farmers did not make decisions based on economic rationality alone, but also on motives, attitudes and values. Several scholars started to use terms like 'good farming' and 'good farmer', but it was not until Burton's paper in 2004 that the GF-concept became established as a category important in and of itself (Burton et al. 2021).

In the last 15 years, the GF-concept has reached a multitude of uses. There are three main ways to use the term:

1. Farmer-based use: The GF-concept can be seen as a common sense category used by farmers to refer to a farmer whose farming behaviors (skills and practices) reach a certain level of competence. It can also be seen as an emic category (intrinsic category) used by farmers to describe the social significance of other farmers' work. Within this category certain symbols are meaningful for the members of a social group, but can be hard to understand for non-members (Burton et al. 2021).
2. Agricultural/natural science and policy-based use: For agricultural/natural scientists, consultants, industry members or politicians, the GF-concept can be used as an assessed standard of how productive and/or environmentally harmful a particular farmer's practice is. In pre-scientific agriculture, the GF-concept was used to assert the validity of one's own experimental practices without presenting evidence (instead one referred to 'good farmers' in the neighborhood). In continuation of this, the GF-concept has been, and is still, used as a rhetorical tool by those seeking change to claim that a certain type of agriculture is 'good' or 'correct'. E.g., in current times 'good farming' is linked to being sustainable, innovative, entrepreneurial, etc. (Burton et al. 2021).
3. Social science based use: the GF-concept is an academic conceptualization of cultural scripts and symbolic capital, which are generated or encouraged in farming practices. This concept tries to understand the reason for farmers' resistance toward political attempts that try to change agricultural practices. Within social sciences, the GF-concept is also used as a common place reference for social norms in agriculture. Similarly, social scientists use the GF-concept as a methodical tool to examine farmers' social norms and behaviors. Since the farmers use the term themselves, it can be helpful to simply ask them 'what would a GF do?'. Last, but not least, the GF-concept is also used as a moral standard when several valid GF-values are in conflict with each other. For example, is a GF one who addresses climate change, feeds the world or serves his/her local community? All of these are morally valid positions, but they may conflict with each other (Burton et al. 2021).

In this thesis I will mainly use the term based on social sciences. Despite these different uses, Burton et al. (2021, p.8) reminds us that the essential meaning of GF is the same:

It is notable that whether used by farmers, natural/agricultural scientists, or social scientists, the essential meaning remains the same – the ‘good farmer’ term is used to refer to the extent of cultural competency/morality in farming either by those within the peer group, those seeking to influence the peer group, or those studying the cultural construction and functioning of the peer group.

### **Bourdieu’s forms of capital**

The GF-concept is based on a couple of social theories linked to identity, symbolism and different forms of social capital. One of the most fundamental is the theory of capital developed by the French sociologist, Pierre Bourdieu. According to Bourdieu (1986), capital does not only exist within the economic realm, but also within the social and cultural realm. *Economic* capital is simply economic resources, *social* capital is resources which can be mobilized via social relations and mutual obligations (e.g., having a large social network), and *cultural* capital is resources in the type of knowledge, skills, dispositions and ownership of culturally important objects (e.g., having an academic education or owning an expensive car). What is considered valuable social or cultural capital depends on the context. Capital can be transferred between the different forms via *symbolic* capital, which is social status, reputation and prestige. It is the cultural capital and its ability to generate symbolic capital, which in turn can strengthen social relations, that is particularly relevant for the GF-concept. There are three forms of cultural capital:

- *Institutionalized* forms, which offer the individual a certification of consistent cultural competence that is comparable across different agents. Within agriculture, this could be having an agricultural education or winning a breeding competition.
- *Objectified* forms such as material objects with a high status value. The value of the objects is dependent on its usage, which has a specific purpose. For conventional farmers, this could be new tractors or a straight-lined field with no weeds. However, if a farmer uses his/her new tractor in a ‘bad’ way, he/she could lose cultural capital.
- *Embodied* forms such as skills and knowledge that have been achieved through labour and experience. This form cannot be exchanged quickly with other forms of capital, since it is embodied within the subject. For farmers, embodied cultural capital often comes in the form of knowing when to plough, how to train farm dogs, which chemicals to use at which time, etc. It is knowledge that has been learned mainly through experience and/or accumulated through generations (Burton and Paragahawewa 2011).

What is considered valuable cultural capital differs depending on the community. Within agriculture, if a farmer wishes to be seen as a GF, he or she has to achieve a certain level of cultural capital and be able to show that to other farmers. If he/she succeeds (e.g., by having tidy fields or winning an award for best livestock breeding) he/she will gain cultural capital and improve status



and reputation. A high status as a GF can lead to increased social capital for the farmer and for his/her family as well (Riley 2015). The social and cultural capital is often passed on to the next generation on the farm meaning family farms can accumulate a high level of these types of capital through the generations (Burton and Paragahawewa 2011). This also means that if a farmer fails to be a GF, it can have big social consequences for him/her and might lead to an exclusion from the community. Therefore, the different forms of capital have a huge impact on which agricultural strategies farmers choose to use. According to Haggerty et al. (2009, p. 769):

If Bourdieu is correct, and the pursuit of social status is fundamental to social life, farmers will strive to be “good farmers” not “bad farmers”, to accrue “good farmer” capital, and this drive will inform their farming strategies.

Farmers are unique in the way that their profession and identity often are closely intertwined. It is not unusual to hear farmers say: ‘Farming is in my blood’, or ‘we have been farmers for several generations’, meaning that farming is not only a profession, but also an identity and a way of life. Therefore, failing to be a GF does not only reduce the farmer’s cultural or social capital, it may also affect the farmer’s identity negatively.

### **Identity theory**

In order to clarify how GF-values are shaped, encouraged or changed, it can be helpful to use the identity theory presented by Burke and Stets (2009). Their basic identity model is oversimplified, since identities function in complex ways on both conscious and subconscious levels (Burke and Stets 2009). It does, however, clearly show how identities react and adjust to their social and biophysical environment. An identity is composed of four components: An identity standard, a comparator, an output and an input. These four components are arranged in a circular process, and each component is in itself a process of dealing with meanings within the environment and within the self. The purpose of this process is that the identity controls the meanings it perceives (Burke and Stets 2009).

A person’s identity standard is a defined set of meanings at an identity. These meanings are fairly stable and stored in a person’s memory. However, people can have several identities which they adjust depending on their social context (e.g., professional identity, family identity, friend identity, etc.). The meanings of the identity are used as a reference point for the comparator component, which compares the perception of inputs to the identity standard. A person will always try to control his/her perceptions of input, so it matches with the identity standard. This has an effect on how the person reacts, which is the output. If the input and the identity standard ‘match’, the person will continue current behavior. If they do not ‘match’, the person will try to change behavior in order to adjust to the social situation. The process between the output and input happens in the social and biophysical environment, while the process between input and output happens within a person (Burke and Stets 2009). The whole circular process happens continuously, and a change in behavior can take place in everyday actions or rapidly after a single positive or negative event. Figure 1 below shows the process.

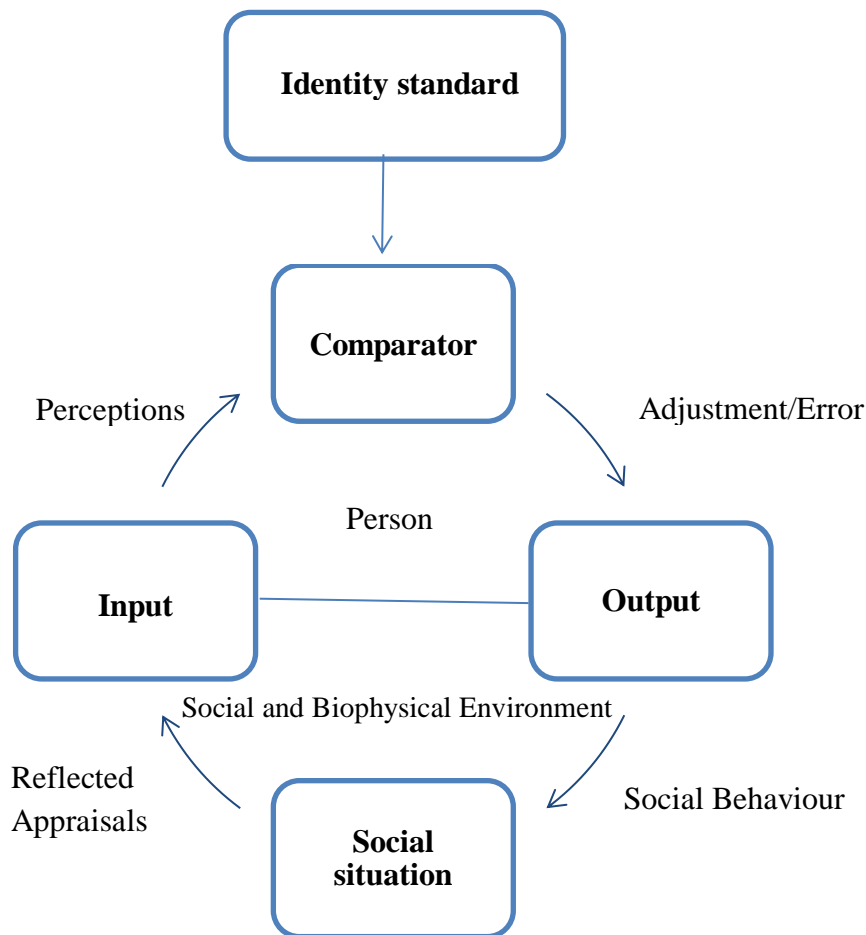


Figure 1. Process of comparing and adjusting identity to the social and biophysical environment. Adapted from Burke and Stets (2009).

An example can show why this is relevant for GF: A farmer can have a set of standard principles of what it means to be a GF (standard identity) and will strive to achieve these standards. When he/she generates a certain output (e.g., has tidy fields, works hard, brags about his/her high yield), this will be received in social situations (e.g., other farmers noticing the tidy fields or the amount of working hours). This situation generates a certain input (e.g., appraisal of fields or increased respect from other farmers). If the input ‘matches’ with the identity standard, the farmer will continue his/her behavior and if not, he/she will adjust and change behavior. However, if there are large changes in the social and biophysical environment, the farmer may struggle to match the input with his/her identity standard. When conventional farmers, for example, are forbidden to use the same amount of pesticides as they used to, this can create an identity conflict in them. They have the standards of tidy fields, yet they may not be able to show these GF-symbols to the same degree they are used to. Therefore, they may start to feel like a ‘bad farmer’, since the input no longer ‘matches’ the identity standard. This can cause a great deal of negative feelings for the farmers and lead them to resist

changing agricultural practices. Hence, farmers' behavior and their choice of agricultural practices are not merely led by economic rationality. Identity, values and social norms also determine how they choose to act.

### **How GF-symbols have developed**

The symbols of a GF are in a constant, but slow process of change. Sudden changes are rare. A wide range of factors will influence the symbols (e.g., regional environment, traditions, type of production, public debates, policy reforms, etc.) and in the recent years, symbols of GF have become broader due to the rise of 'alternative' agriculture (e.g., organic, agroecological, market-gardening, etc.) (Burton et al. 2021). The agricultural practices that symbolize GF will, however, always be placed on a spectrum between 'necessity' and 'luxury'. Symbols like a profitability, healthy crops and efficient management are necessary for farmers to survive in current times, whereas beautiful hedgerows and extremely straight ploughing lines are more a luxury practice, bound to prestige and tradition (Burton 2004; Burton et al. 2021). According to Burton et al. (2021), three qualities must be fulfilled if a certain practice should develop as a GF-symbol:

1. The result of the application of cultural capital (mostly embodied capital) should reflect the extent of the capital held by the farmer. An agricultural practice where skills and knowledge have little impact on the outcome is unlikely to become a symbol. For example, applying the correct amount of fertilizer will have a direct effect on how the crop looks, which means that a healthy crop shows a farmer's skill to apply the correct amount of fertilizer.
2. The result of the application of cultural capital needs to be visible as opposed to hidden. Exact financial profits, for example, are not directly seen as a GF-symbol, since profits are generally only known to the farmer him/herself. Healthy crops or well-managed fields are, on the other hand, visible to others and therefore have a higher status as GF-symbols.
3. Other farmers must have access to visible displays of the application of cultural capital. Roadside farming (farmers driving around in the area and observing other farmers' fields), social media or farm discussion groups are examples of displays, where farmers show their GF-symbols and see other farmers' GF-symbols.

Farming is a highly visual profession and the agricultural landscape is thus a reflection of the farmer's skills and even his/her identity. Burton (2004, p. 207) states that:

The farm landscape is not simply a workplace, but rather, as Leopold (1939) observed sixty years ago it is "the owner's portrait of himself".

Agricultural landscapes are, for the trained eye, full of GF-symbols. Since this thesis focuses on conventional farmers, it will be the GF-symbols of those farmers which are central. Some GF-symbols are particularly important for conventional farmers; tidy fields, high yields and farming machinery generally have a high status among conventional farmers. Therefore, it is important to understand why and how they developed.

## **Tidy fields**

The symbolic value of tidy fields – meaning straight plough lines, no weeds and an even crop density – began to form in England in the 18<sup>th</sup> century. It was mainly the new farming machinery, such as the drilling machine, which demanded a high level of symmetry in order to function. Prior to these machines, sowing was done by hand (broadcast sowing) and spread across the fields. The outcome of this technique was a thick coverage of seeds, which minimized weeds. Broadcast sowing did not demand straight furrows, but it was an expensive process due to the large amount of seeds needed (much of which was wasted). Drilling machines established the need for straight furrows, skilled ploughing and extensive weeding. Drilling machines were, however, more efficient and precise. GF-symbols began to change; bare soil used to be an indication of bad hand sower, which had spread the seeds unevenly and allowed spots where weeds could grow. For farmers that used drilling machines, bare soil was an essential feature of a weed-free crop. Due to the straight lines, weeds could be handled with a hand or horse hoe, and the soil between crops were to remain bare. Broadcast sowers had simple tools, while drill farmers had machines demanding technical skill, precision and sometimes spare parts from other parts of the country. Therefore, being a successful farmer of drilled crops depended on intelligence, capital and technical skill. The precise ploughing that enabled efficient drilling, became a highly valued skill, and good plough men had a high status in farming societies (Burton et al. 2021) Agricultural landscapes started to become displays for farmers' ploughing skills, and some farmers would even break their sabbath on Sundays in order to view the displays of neighbouring farms. According to Burton et al. (2021, p. 50), this shows exactly how important social displays were (and still are):

That fact that farmers would risk the wrath of God (or their God-fearing neighbours) in order to view others' displays of good farming illustrates how important these social displays could be.

The change from broadcast sowing to drilling happened over generations, and both types of sowing were advocated by different farmers. In the end, field experiments fell in favor of drill sowing, since it was more efficient and produced higher yields. The drilling machines required a new type of farmer, and they were essential in establishing GF-symbols that are still important today (Burton et al. 2021).

## **High yields**

A high yield is a symbol of efficient land use and good farming practices (Burton 2004; Saunders 2015). It is indirectly linked to the needs of an increasing population; it started to develop during the 18<sup>th</sup> century along with the Industrial Revolution, where efficiency, technical skills and machinery were central components. Great Britain had a rapidly growing population and demanded higher and higher yields from farmers (Marks 2015). Later on, the development of artificial fertilizer and industrialized farming machinery allowed farmers to increase their yields in ways that were no

longer bound to regional, natural limits (e.g., manual labour or local fertilizers). After WWII farmers began to adopt a highly productivist mindset, shaped by the increasing industrialization and the narrative of ‘feed the world’ (Burton 2004). According to this narrative, farmers should continue to increase their yield in order to feed an ever increasing population. This narrative has shaped public policies, and thereby farmers, for decades, and it is a central argument for the continuation of industrial agriculture despite its heavy environmental pollution (IPES 2016). As a GF-symbol, a high yield is not something farmers can visually display, but it can be shown at social gatherings (e.g., bars, dinners or workshops) (Burton 2004). Still, a high yield is only made possible by a healthy crop, which is a GF-symbol. A high yield symbolizes good farming practices, efficiency, technical knowledge and a clear dedication to farming (Burton et al. 2021). There are several examples of how farmers use crop yield as a way to establish their status in the farming community (Bell 2004; Burton 2004; Saunders 2015), and crop yield gives a ‘standardized’ measure of a GF. One could argue that income could function as such a GF measure, however, the income is not only dependent on good farming practices. Burton (2004, p. 203) states that:

...Whereas net income is to an extent dependent on forces outside of the farmer’s immediate control, ‘yield’ itself measures only the husbandry ability of the farmer and therefore represents a better indicator of a ‘good’ farmer than any economic measure.

Although the values and symbols of GF are broadening, high yields are still an important symbol. The productivist mindset is dominant among farmers, despite years of AESs that should transform agriculture towards more multifunctionality and sustainability (Burton and Paragahawewa 2011; Saunders 2015). The GF-symbol of high yields is also used as an argument against organic farming, since organic farming is said to produce lower yield. However, it is important to highlight that it is not, and has never been, conventional agriculture that ‘feeds the world’. The world produces more than 1½ times enough food to feed everyone on the planet, yet 792 million people live in hunger (Holt-Giménez et al. 2012; IPES 2016). Hunger is a problem caused by unevenly distributed resources due to poverty, social exclusion and other factors (IPES 2016). However, the narrative of ‘feed the world’ is an integrated part of most conventional farmers and along with it, the GF-symbol of high yields.

### **Farming machinery**

In 2004 Michael Bell published a book, which described his fieldwork among industrial farmers in Iowa, where he experienced some of the biggest agricultural machines in the world. One of the farmers proudly explained his tractor could plant an acre a minute (Bell 2004). Big farming machinery has a special status for most conventional farmers. It is an integrated part of their farming operation, and it can symbolize economic capital, power, technical skills and masculinity. The drilling machines mentioned earlier may be seen as some of the first farming machinery symbolizing a GF. Today, conventional farmers can have whole machine ‘parks’ with a wide range of different machinery used for different tasks. It is, however, important that the farmer knows how to use his machinery, if it has to be seen as a symbol of GF. Driving tractors in very wet fields or getting an uneven crop due to wrong application of fertilizer can be seen as ‘bad farming’ (Burton

et al. 2021). A correct use of machinery symbolizes a farmer with technical skills and an efficient production. It can also symbolize that the farmer is independent of others; it only requires ‘him and his machinery to get the job done’ (Bell 2004; Bell et al. 2015; Burton et al. 2021). This independence is partly false though, since the machinery needs fossil fuels and parts to function. In addition, few farmers can actually pay for their farming machinery. Therefore, parts of the financial debts most farmers have are caused by the continuous investments in new farming machinery (Bell 2004; Hajdu et al. 2020). Since farming machinery absorbs many skills of the farmer (and thereby removes GF-symbols), it could be assumed that farmers would be against the increasing mechanization of agriculture. According to Burton et al. (2021) this is not the case, although there has been an impoverishment of rich symbolic displays due to increased mechanization. Still, GF-symbols are always developing and they are partly adapting to the mechanization. In the future, GF-symbols may be more linked to handling of software and mechanized production systems. However, farming machinery is an important GF-symbol for conventional farmers and will probably continue in the future.

### **Change of GF-values**

GF-values and the symbols of them are in a constant mode of change. However, the rate of the change differs. Sudden changes are rare and usually caused by extreme events (e.g., sudden changes in seasonal weather or economic conditions). Slow changes are more normal, and it can take decades or centuries for certain GF-values or -symbols to change. Changes are caused by a wide range of factors such as weather conditions, socio-economic changes, new technology and/or policy reforms (Burton et al. 2021). As explained earlier, it was new technology that generated the need for tidy fields, which then became an important GF-symbol for conventional farmers. Currently, the emergence of alternative production systems has started to bring new GF-values and -symbols. Organic farmers value elements like diversity and IPM (integrated pest management), while ‘market gardeners’ often value polycultures and no-tillage management (ATTRA 2009; Saunders 2015; Jordbruksverket 2022a). Both types of farmers bring new definitions of what a GF can be, and this can have an effect on the more ‘classical’ symbols of GF (e.g., tidy fields) (Sutherland and Darnhofer 2012; Saunders 2015). Policy reforms concerning environmental issues or AESs have also affected GF-values, but to a varying degree. The design, implementation rate and rewards (economic or social) of these policies have affected the level of success (Burton and Paragahawewa 2011; Sutherland and Darnhofer 2012; Riley 2015; Westerink et al. 2021). If new practices should become GF-symbols, they have to live up to the three qualities described earlier and be supported by the farming community. It is important to remember that GF-values are established in social contexts and therefore changed in them as well. Changes are unlikely to happen, if there is no support from the social context in which the farmers are embedded.

### **The treadmill of production**

As any producer within the capitalist system, farmers produce according to what sociologists call ‘the treadmill of production’. It is a process of basic capitalism and it works in a cycle which has an ever-increasing speed. The treadmill of production is a driving force in why farmers often choose to

up-scale and rationalize their production. It is therefore important to know how it works. The following description is based on Bell (2004).

If you are a producer, and you want a higher income, you have four production options:

1. You can simply raise your prices, without changing your production. But you may not sell as much as before, so your income probably stays the same.
2. You can produce more, so that you can sell more. This may generate higher income for a while, but there will be an increase in supply, since other producers notice your strategy is working well. This increase will lead to a fall in prices.
3. You could adopt a new technology which allows you to produce a higher output for less money. Since your own cost per unit is lower, a fall in prices due to an increase in supply will still generate a higher income for you. But the new technology will quickly be adopted by other producers, and prices will fall again resulting in a lower income for you.
4. Another option is to adopt a new technology, which allows you to produce at the same level of output as before, but cheaper. This will result in the same prices for the same output, yet at a better margin. But new technology is expensive, so in order to pay for that, you have to increase the output. This leads to a fall in prices, which again results in a lower income for you.

Even if you find yourself in a place where you are satisfied with your production and income, someone in the market will make a move which affects you. Therefore, you always have to try to produce more output at a lower input, which intensifies the whole circle. For farmers, this process can be particularly intense, since food is a commodity unlike others; there is an 'inelastic demand', since people can only eat so much food. The combination of inelastic demand and regional weather conditions can lead to what Bell (2004) defines as the 'farmer's problem'. Farmers in the same region are often on the same treadmill, since they have the same climate conditions and pay attention to the same information sources (there can of course be different types of production). If you have a good season on your farm (good weather, right technology, good production), most farms in your region probably have a good season as well and they sell the same crop as you. This means that you'll have a crop to sell, but bad prices due to the high supply. If the opposite takes place – a bad season – prices are higher due to a lower supply. However, you don't have a lot of crops to sell, which means you barely can benefit from the high prices. Therefore, the farmer's problem is that you only make money when your season has been good and other farmers' seasons have been bad – which almost never happens. A consequence of this is that some farmers choose to buy land with different characteristics as a way of decreasing risk (so parts of their land will produce well, other parts will not).

The treadmill of production keeps competition high and prices low in the capitalist system. It does, however, force farmers to rationalize their production continuously in order to 'stay in the game'.

The highly productive mindset, which most conventional farmers have, is usually caused by this treadmill. Such a mindset is characterized by a very utilitarian approach in which farmers try to utilize their land as much as possible in the most efficient way (Burton 2004). Although the treadmill of production is usually not beneficial for the farmers or the environment, it is difficult to stop. One way to slow it down is to reduce the number of producers. Policy reforms and increased competition on the global market has, among other things, decreased the number of farms rapidly (Bell 2004; Hajdu et al. 2020; Jordbruksverket 2020a). However, the speed of the treadmill continues and forces farmers towards increased rationalization. It is also a possibility to ‘jump off’ the treadmill by e.g., selling your produce in alternative ways such as community supported agriculture (CSA). CSA allows producers and consumers to share gains and losses (high yields on some crops, reduced yields on others) and ensures that the farmer has a stable income (Bell 2004; Andelsjordbruk Sverige 2022). Converting from conventional to organic production can also be seen as a way to ‘jump off the treadmill’, although it depends on how the produce is sold, and how idealistic the farmers are. Although such alternative production systems and selling channels exist, it does not mean the treadmill of production has no effect on these alternatives. The low prices on food, caused by the treadmill, can influence how high or low farmers can set their prices even in alternative selling channels. This consequently affects the profitability of ‘alternative’ farms, and how these farmers choose to design their production system. Also, ‘jumping off’ is not an easy choice: It requires economic capital, risk taking and detailed planning (Bell 2004; Leeuwis 2004). Therefore, staying on the treadmill is the option most conventional farmers choose. It can be viewed as one of the ‘chains’ keeping conventional farmers tied to a certain path, although they may wish to change agricultural practices.

### **Path dependency for conventional farmers**

Many conventional farmers get tied to a certain path, when they start their agricultural production. Whether a farmer inherits a farm or not, it generally takes large investments to start or sustain a farming business. High prices on land, modernization of stables, new machine parks, etc., often requires farmers to take financial loans. As the production system is up and running, there are many insecure factors which affect the profitability: Prices on inputs may be high, a drought can cause low yields, a ban on certain pesticides is passed, etc. Meanwhile, the treadmill of production and the global market also pushes for lower prices. Therefore, most farmers try to rationalize and upscale their production in order to secure profits. This does, however, require new financial loans (Bell 2004; IPES 2016). A vicious cycle is thereby started: The increasing debts lead to smaller economic margins, which then intensifies the circle. Figure 2 below shows this cycle.



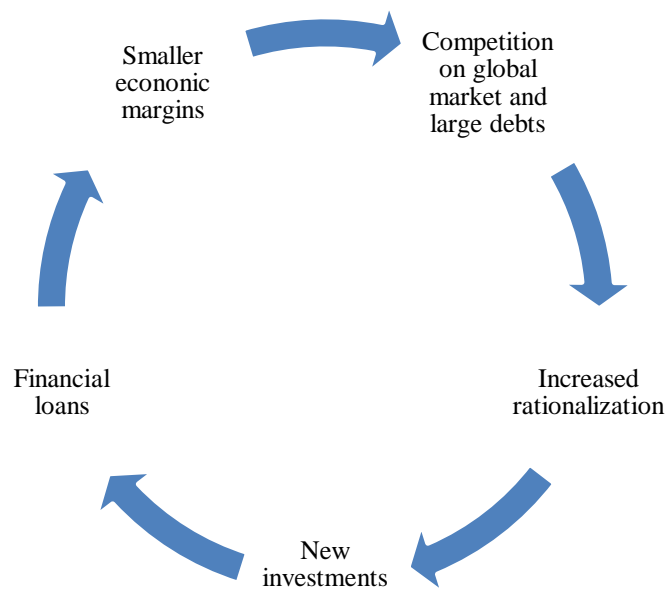


Figure 2. Cycle which create path dependency for conventional farmers.

This cycle does not give much space for changing practices or taking risks, since the economic margins are very small. Since many risks are linked to agricultural production, farmers usually choose to ‘play their safe cards’ to secure their profits and thereby the survival of their farm. ‘Safe cards’ could be, e.g., spraying pesticides or investing in new technology (Bell 2004). In other words, the farmers are economically tied to the path of conventional agriculture with little space for trying new practices. The size of economic margins may differ and therefore the force of the cycle as well. Farmers with high levels of economic capital have better chances of breaking free of the cycle (e.g., if they inherit a very profitable production or had several years with high yields). Such farmers may also choose to ‘jump off the treadmill’ and try alternative production systems.

### A toolbox

The GF-concept provides a toolbox for understanding some of the driving forces behind farmer behavior. Conventional farmers will strive to accumulate social and cultural capital by displaying GF-symbols. Identifying GF-values and their symbols can give a more accurate picture of why and how farmers choose certain agricultural practices. Furthermore, the treadmill of production and the description of path dependency help to clarify the restricted situation most conventional farmers are in and why they have small margins for changing practices. An understanding of this situation and the GF-concept may give answers to why conventional farmers generally resist more sustainable practices, and how that resistance can be minimized. Since farmer behavior is shaped by GF-values, a shift towards more sustainable GF-values may generate a more sustainable agriculture.

## **Methodology**

This research is based on a literature study about the GF-concept and empirical data gathered from conventional Gotlandic farmers. Qualitative research methods were chosen as suitable for this thesis, since they enable an understanding of the social world by examining the interpretation participants have of this world. These methods generally have an inductive nature, where theory is generated by research (Bryman 2016). The central topics in this thesis are social phenomena, which cannot be quantified in numbers and graphs. In order to understand them, a much more in-depth and interpretivist approach is required.

## **Literature**

The literature chosen for this thesis has set the frame for the research design, the interviews and the analysis of these. The GF-concept was chosen as a suitable tool for understanding farmers' central values and norms, which is the aim of this thesis. Research on the GF-concept started in the 1990'ies and the topic is continuously researched, which gives the literary sources a wide timeline (Burton et al. 2021). Therefore, the literature clearly shows how central farmer values and norms have developed during this time, and how studies of the GF-concept can be conducted. The sources also gave suggestions on how to design policies or facilitate conversations in ways that can shift GF-values towards more sustainable ones. The knowledge gathered from the GF-literature was used to design the field research and the analysis of the interviews. There were, however, other important literary sources as well. In order to achieve a more holistic understanding of conventional farmers, sources about their context (e.g., economic setting, current policies, production systems and so on) were used. Holistic approaches are important when researching social phenomena like GF-values, since they are shaped by a wide range of factors in their context. System thinking and holistic approaches enable a wider understanding of an issue and therefore possibly also better solutions to these (Schierer et al. 2004). Furthermore, literature on alternative production systems and food systems was used to define a sustainable agriculture and to offer suggestions for more sustainable GF-values and food systems.

The GF-concept could be criticized in several ways. It could be argued that the concept has been shaped and developed mainly in the contexts of farmers in the Global North. Studies carried out in other parts of the world might reach different conclusions about the GF-concept. Furthermore, literature on the GF-concept generally lacks perspectives from women, minorities or people of color, since almost all participants in the studies are white males (Burton et al. 2021). This is true of the participants in this research as well. However, this study specifically intended to give insights to the worldview of a typical, Swedish conventional farmer, which usually is a white male. Gender and/or alternative perspectives have therefore not been included in this research, although these perspectives have to be pursued in future GF-studies (Burton et al. 2021). The concept of GF could also be criticized for being too narrow a concept to understand farmers, since they are influenced by many factors. This is why it is important to have an understanding of the context in which farmers are embedded, and thereby observing which factors that influence them. Nevertheless, it is not possible to give complete descriptions of each farmer's context, since it is a highly complex matter.

This thesis only makes use of qualitative research methods in order to analyze GF-values, although it might have been beneficial to combine these methods with quantitative ones. Natural scientific approaches may have given a more accurate picture of how GF-values are directly linked to ecological conditions. It could, e.g., be possible to study how the GF-values of a farmer affected certain biological aspects of his/her farm. However, such an approach was rejected in favor of a much more subjective one, where the farmers' own values and worldviews were in focus.

### **Sampling methods**

All empirical data in this thesis were gathered from eight Gotlandic conventional farmers. The sampling of farmers to interview was based on three criteria:

- they were conventional farmers located on Gotland
- they had different production types from each other
- they had different ages

These criteria were chosen in order to give an accurate representation of what it means to be a conventional farmer on Gotland today. This is important, since a data collection too broad or too narrow may fail to represent the group in focus (Bryman 2016). Personal connections to Gotland enabled contact to two interviewees, who then facilitated contact to the other interviewees. This is also known as 'snowball sampling' (Bryman 2016). Prior to the field work, reaching out to several farmers was done through Hushållningssällskapet, but only one farmer responded. Therefore, most interviewees were contacted through other interviewees. Due to the war in Ukraine and rising prices on inputs, all contacted farmers found the times stressful and challenging. This affected the number of interviewees, since several farmers declined to participate in the research due to stress. However, the number of interviewees gave a suitable amount of data for this thesis. 'Snowball sampling' can have the negative effect that the researcher only comes in contact with a certain fraction of the group that is studied (Bryman 2016). This effect was minimized by the fact that the farmers knew each other across different production systems and therefore enabled contact to a diverse range of farmers. Nevertheless, all interviewed farmers were located in southwestern Gotland, and it might give a better representation, if farmers from all over Gotland had been interviewed. Due to limited time, that 'spatial' representation was not pursued. Also, the percentage of each production type in the data collection does not align with production types in general on Gotland (e.g., sheep production is an important part of Gotlandic agriculture, but not represented here). It could be argued that it would have given a wider perspective, if interviews had been done with other people than the farmers themselves, e.g., consultants at Hushållningssällskapet or organic farmers. However, since this thesis focuses on personal values and worldviews, it seemed reasonable to only interview the farmers.

## Empirical data

The empirical data gathered for this thesis is shown in table 2 below.

*Table 2. Empirical data about the interviewed farmers' age, production types and size of farms.*

| <b>Farmer</b> | <b>Age</b> | <b>Type of production</b>  | <b>Size on farm (ha) (approx.)</b> |
|---------------|------------|----------------------------|------------------------------------|
| A             | 63         | Vegetables and berries     | 40                                 |
| B             | 57         | Pig                        | 95                                 |
| C             | 68         | Dairy                      | 500                                |
| D             | 46         | Pig                        | 365                                |
| E             | 47         | Dairy                      | 200                                |
| F             | 36         | Vegetables and grain       | 90                                 |
| G             | 45         | Beef meat, potatoes, grain | 300                                |
| H             | 56         | Pig                        | 250                                |

All farmers were located in the southwestern part of Gotland. They had conventional productions and worked full time at their farm. Some had hired staff, while others worked alone or with help from their family. All farmers had inherited their farms from family members, and the inheritance could go as far back as six generations. Subsidies from the EU were received by all farmers to a varying degree (7 - 30 percent of the total revenue were subsidies). All farmers were male. The interviews were conducted between the 2<sup>nd</sup> and 15<sup>th</sup> of April, 2022 and each interview lasted 1-2 hours. All interviews took place at each interviewee's farm. Sometimes the farmer's family joined the interview shortly, if they were in the same room. One farmer had his family present the entire interview, and they all answered on equal terms. Some farmers showed their production before or after the interview. All farmers are made anonymous and referred to as farmer X. This is done to protect the farmers' identity. Prior to all interviews, it was explained that the interviews were anonymous, and that they were able to cancel at any time. All interviews were recorded with the consent of each farmer.

## Semi-structured interviews

The interviews were semi-structured and conducted from the same interview guide. This interview type was chosen, since it allows for flexibility in questions and can give a deep insight of how the interviewee views the world (Bryman 2016). Semi-structured interviews follow a structure of questions tied to broader themes instead of strict, narrow subjects. There is room for alternative questions, personal reflections and anecdotes which are important, when the study focuses on identity, worldviews and personal values (Bryman 2016). The flexible structure also meant that not all farmers were asked the same questions, however, they were all asked questions within the same themes. The interview guide was designed before the interviews and started with simple questions about the farm's history, production type, size, etc. These types of questions allow the researcher and the interviewee to get used to the interview situation and to create a safe space for both parties (Bryman 2016). Afterwards questions about themes such as GF, sustainability, knowledge exchange, Big Ag, identity and community were asked. Some interviews followed the interview guide quite strictly, while others were much more sporadic and covered areas outside the interview

guide. It might have been beneficial to interview some of the farmers several times or to do more in-depth fieldwork (e.g., participant observation or transect walks), since that would have built more trust and might have enabled ‘deeper’ answers to the personal questions. It could also have contributed to a more holistic picture of the farmers (e.g., how they work together, or how they interact with nature or their livestock). Unfortunately, limited time and resources inhibited these methods.

## **Analysis**

The interviews were transcribed in their full lengths. Thereafter, an analysis of what each farmer considered to be GF was carried out. Concepts which appeared often constituted a number of keywords from each interview. Based on these keywords, a mind map of GF-values were made. A similar process took place when analyzing the farmers’ view on sustainability. The first analysis was based on the GF-concept by Burton et al. (2021) and aimed to show exactly what a GF meant for the Gotlandic farmers. The second analysis, which centered on sustainability, was based on both agroecological concepts and the GF-concept.

When analyzing interviews, there are some concerns the researcher has to be aware of:

- The researcher has to be observant of the varying reliability of the answers the interviewee gives. Some interviewees may adapt their answers to what he/she believes that the researcher wants to hear, or they may exaggerate their answers to make certain points. Others may hold back some information due to shyness, or if they feel uncomfortable in the interview setting (Bryman 2016). It is therefore important that the researcher is aware of these factors when conducting the interview and doing the analysis. Nevertheless, in studies which focus on identities and personal values, the factuality of the interviewees’ statements is not the most important aspect.
- The analysis can only be based on what the interviewees *have* said, not on what they *could have* said. Some interviewees may leave out a lot of information or forget to mention certain things, since they assume that the researcher has the same knowledge as they do (Bryman 2016). This was apparent in some of the interviews; one farmer left out some descriptions of GF-values at first, since he assumed that the researcher was aware of these. The risk of this was minimized by asking the farmers to be specific in their answers. Nevertheless, some of the farmers may, e.g., have done more sustainable practices or valued things differently, but failed to mention it during the interview.

Based on the analysis, a discussion about how to change current GF-values towards more sustainable ones were carried out. Furthermore, suggestions on how such a process could be facilitated were given as well as suggestions on what has to change in the current food system in order to make it sustainable.

## **The context of Gotlandic farmers**

In order to understand the GF-values of the interviewed farmers, a description of their context is necessary. Although each farmer's context is different, the following elements have an effect on each farmer to a varying degree and can help to examine the setting in which the farmers are. There are, of course, other elements influencing the farmers, but the following were chosen as the most significant ones.

### **Ecological conditions**

Gotland is located in the Baltic Sea and has an area of approximately 3000 square meters. This location generally causes beneficial weather for agriculture; The sea generates late spring seasons, but long and mild autumn seasons (SMHI 2021). Crops which ripe late in the season are therefore well suited for cultivation on the island. Gotland also has a high level of sunshine hours compared to the rest of Sweden (Region Gotland 2017). Calcareous soil is the most common soil type, which has high levels of fertility. The soil layers are thin and therefore, they have a limited capacity to hold water. This causes groundwater levels to vary swiftly, especially in times of drought (SMHI 2021). The interviewed farmers were located in the same area on the island, yet they faced different ecological conditions.

### **An agricultural region**

The practice of agriculture on Gotland can be dated several thousand years back and the region has a strong cultural connection to farming (Olsson 2016). A large range of different crops has been cultivated, and also some livestock breeds are native to Gotland (such as the horse breed *Gotlandsruss* and the sheep breed *Gutefår*). Since the 18<sup>th</sup> century, Gotlandic agriculture has developed in line with Western agriculture, and today it is one of the most prominent agricultural regions in Sweden (Olsson 2016). 70 percent of the land is used for agriculture or forestry, and the agricultural sector remains as an important source of income for the citizens of Gotland. Dairy production is seen as the foundation for Gotlandic agriculture, although a diversity of production types exists and continues to expand. A large percent of farmers have additional sources of income linked to tourism, energy projects or entrepreneurship. Gotland also has a strong culture of farmers' shops, where farmers can sell their produce directly to customers. Due to the large number of tourists visiting Gotland each year, these customers are often tourists. Sheep remains to be a vital livestock for Gotland, and they are used, in combination with cattle, to maintain the special agricultural landscape on the island. 19 percent of the agricultural land is used for organic farming, making conventional farming the dominant way of production. 80-85 percent of the agricultural produce is exported to the mainland (Region Gotland 2017).

### **Swedish agricultural policies - history and changes**

Gotlandic farmers are affected by current Swedish and EU agricultural policies, which are the result of a longer history of agricultural policies. A short historic view of these policies is presented here. In the recent decades, Swedish farmers have experienced big changes due to the agricultural

policies of Sweden and the EU. In 1990, an agricultural reform which deregulated agricultural markets was accepted by the Swedish government. It would become the market, not the state, which set the prices on agricultural produce. The goal of the reform was to restructure Swedish agriculture towards increased competition on the global market. The farmers who could not push their prices to compete on this market had to close their production or change it to receive compensation from the state. This reform reduced the number of farms drastically (Hajdu et al. 2020). In 1995, Sweden entered the EU, and Swedish farmers became part of the CAP system. This enabled the survival of many smaller farm productions, but also led to more import of food and increased levels of bureaucracy (Jordbruksverket 2011b; Hajdu et al. 2020). These policy changes have led to fewer, but bigger farms in Sweden. From 1990 to 2020 the number of agricultural productions has been reduced by 39 percent and this number continues to fall. This reduction process has also taken place on Gotland; in 2020 there were 1287 agricultural productions compared to 1619 in 2003 (Jordbruksverket 2020a). Rationalization and up-scaling are the most common strategies of Swedish farmers in their pursuit to create profitable productions, and this is also what the Swedish and the EUs agricultural policies generally support (IPES 2016; Hajdu et al. 2020). The reduced number of farmers means that the remaining farmers have fewer colleagues, and there is a concentration of power towards the bigger farms. Rural communities are also negatively affected by the decrease of farmers, since job opportunities vanish and farm buildings are abolished. However, agriculture remains vital for some Swedish regions including Gotland (Region Gotland 2017).

### **CAP and future policies**

Swedish farmers receive billions in subsidies each year from the CAP. Almost 40 percent of the EUs budget is given to agriculture (Jordbruksverket 2022b). Farmers can apply for subsidies based on their farm size, production type, greening practices, participation in AESs and so on. On average, 16 percent of the farmers' gross income is based on subsidies. The main function of the subsidies is to keep prices on food low for consumers meaning farmers are paid through subsidies instead of higher prices on food (LRF 2022). The subsidies serve as an income for the farmers and encourage practices which are in line with the CAP (European Commission 2022b; Jordbruksverket 2022b). The CAP is a complex system, and the details of it will not be described here. However, the CAP greatly affects the agricultural practices of farmers and how they develop their productions, because a lot of farmers are dependent on the subsidies. It is primarily through the CAP European politicians try to subsidize conventional farmers towards more sustainable practices. The CAP is renegotiated continuously, and in 2023 a new one will replace the old. The new CAP has a large number of different rules, which will affect the farmers in Sweden. For example, will new eco schemes be implemented, and some of the previous greening practices will become standard, if the farmers wish to receive subsidies (European Commission 2022c; LRF 2021b). According to the European Commission (2022c), the new CAP will be greener, fairer and improve competitiveness. It has, however, been accused of favoring industrial agriculture and failing to handle the urgency of environmental issues (Scown et al. 2020; Via Campensina 2021). Regardless, the CAP has a major influence on the Gotlandic farmers, and consequently it is an important part of their context.

## Conventional farmers on Gotland

Conventional farmers are usually characterized by the following features: They have specialized productions, where they focus on producing dairy, meat or grain/vegetables. Their production systems are big-scale and produce high outputs via high inputs of artificial fertilizers, fossil fuels, pesticides and nutrients (e.g., minerals or livestock feed). Conventional agricultural landscapes are generally monocultural and produce large quantities of a few crop varieties. The produce is sold to national or international markets via long supply chains (Gliessman 2015; IPES 2016). They are generally on a path towards increased rationalization, efficiency and mechanization in order to compete on the global market. These features apply to the Gotlandic conventional farmers as well, although there are individual modifications due to culture, ecological conditions and economic circumstances.

The culture of farmers' shops enables farmers to sell some of their produce directly to customers. Produce from Gotland is sometimes viewed as more special than similar products from other parts of Sweden. For example, Arla sells Gotlandsmjök or Smak Av Gotland sells meat from Gotland to all of Sweden (Arla 2016; Smak av Gotland 2022). It may even be a brand in itself to be a Gotlandic farmer. In addition, since much of the landscape on Gotland has been shaped by livestock such as sheep and cattle, people generally value grazing livestock and view them as an essential part of the landscape. This is beneficial for farmers with these kinds of livestock. Most Gotlandic farmers have inherited their farms from previous generations (sometimes several generations back) and have a strong bond to the farm and the surrounding landscape. There are, however, also some challenges for the Gotlandic farmers; Due to warm weather and the thin soils, there are high risks of drought. Therefore, irrigation has become more and more important on Gotland (SMHI 2021). It can require large investments to establish irrigation ponds, and some Gotlandic farmers do not have the financial resources to do this. Droughts also make crops susceptible to pests and viruses. In 2021, large amounts of crops on Gotland were damaged due to the intense heat and lack of rain (Sveriges Radio 2021). Another challenge is the long distance to the mainland; if e.g., a food manufacturing plant shuts down, it can affect farmers negatively, since they may not have the option to sell to nearby regions (Olsson 2016). Due to the long transport to the mainland, it requires large quantities in order to make it worth the expenses for transport. Nevertheless, Gotlandic farmers are an important part of the culture on the island and play a vital role in the local communities.

Figure 3 below gives a graphical illustration of factors in the context of the Gotlandic farmers. Factors which have not been mentioned in the text are included in the figure.



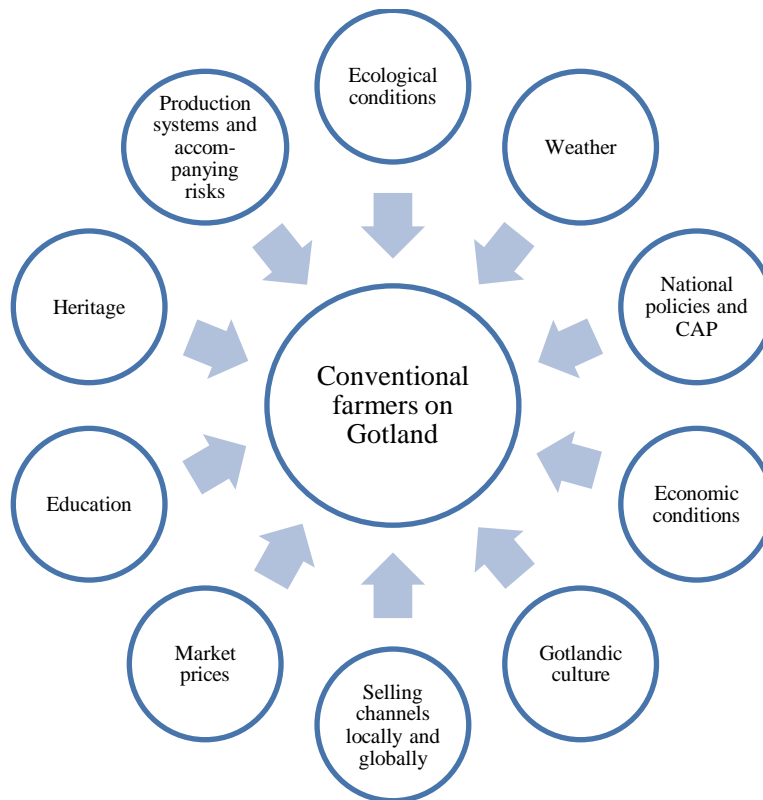


Figure 3. Number of factors in the context of the Gotlandic conventional farmers that have an influence on them.

## What constitutes a GF on Gotland today

The Gotlandic farmers had several views on what it means to be a GF today. Although different types of production generate varying mindsets and skills, a number of qualities were mentioned by all of them, when they were asked to describe a GF. The following text only uses the pronoun ‘he’ or ‘his’, since all the interviewed farmers were male.

### Being a businessperson

Previously, you could be a farmer, but today you first and foremost must be a businessperson and be familiar with that part.

This was said by farmer A (2/3). All of the farmers described how farming today is much more a business than it used to be. Often, their parents or grandparents perceived farming as a lifestyle and did not manage their farms as a business. Their production was usually smaller, more diversified and a lot less bureaucratic than today (farmer A, 2/3; farmer B, 9/3; farmer F, 8/3). A wide range of factors had caused this change, but the main reason seemed to be the increased competition on the global food market which has forced Gotlandic farmers to become more rationalized and mechanized. Therefore, farms were generally seen as businesses which have to be managed

efficiently in order to sustain themselves on the market. According to farmer B (9/3), all ‘bad’ farmers have been outcompeted:

... It has become like this that those who survive are those who are good. All shit is gone. I remember when I was a child, there were a lot of farms that... They had Saturday pretty often if you can put it like that.

In order to stay in the game, a GF is a business oriented person. He has to plan his production according to a budget, manage the farm efficiently and make a profit from his produce (farmer A, 2/3; farmer D, 11/3; farmer F, 8/3). When asked what generally guides the planning of their production, almost all farmers answered that economy was the main guiding principle (farmer A, 2/3; farmer B, 9/3; farmer D, 11/3; farmer F, 8/3; farmer H, 14/3). There was little or no marginal for elements such as tradition or ‘gut feeling’, although these aspects were mentioned as well (farmer B, 9/3; farmer C, 4/3; farmer G, 15/3).

In order to keep a sound economy, the farmers have had to learn how to make good deals in order to maximize their profit. They had to be updated on the current world situation in order to estimate market prices and know when to sell and buy. This was particularly important in these days with increasing prices of fertilizer, grain and seeds due to covid-19 and the war in Ukraine. Market prices can have a huge effect on the farm’s economy, so it was necessary to sell and buy at the right time. As farmer G (15/3) stated:

... If one has to make it as a business, then it is not only the practical part that is the most important. It is very important, even more in these times, with the economy and to keep track of what is going on in the world, keep track of the prices. Sit and think, lock in some yield and buy some input and the like.. You have to keep track, otherwise I do not think you are good enough to make money, even though you work day and night.

However, having a bit of luck was also part of making good deals. Some of the farmers had been lucky to buy fertilizer in 2020 or last spring, so the currently high fertilizer prices did not affect them much (farmer B, 9/3; farmer C, 4/3; farmer F, 8/3; farmer G, 15/3). Farmer E (14/3) had, unfortunately, made a deal on set-price livestock feed that ended in February and therefore had to pay much more for feed than he used to. All of the farmers did, however, agree that there are good and bad years as well as a range of factors that they could not control. However, those who had skills of running a business had a clear advantage.

Farming today is not only about working at the farm, it also requires office work: Applying for subsidies, making good deals, controlling a budget, investing wisely, etc. A heavy load of bureaucracy is linked to farming, and farmers have to fill out a lot of documentation in order to receive subsidies or get certifications from authorities. All farmers expressed frustration towards this bureaucracy, and they were helped by either family or consultants in order to get it right. Since subsidies were an important economic factor for all the farmers, they could not afford to fill out the forms incorrectly. It was, however, not all of them who did everything to maximize their subsidies, since it could be a complicated process that turned out to be an expense rather than an income

(farmer C, 4/3; farmer G, 15/3). According to farmer F (8/3), a GF was a combination of a person who had a lot of drive to do practical work, but also liked to do office related work (e.g., calculating prices or applying to subsidies). Farmer A had a type of 'farm council', which helped him with economy, decision making and legal advice. If he wanted to expand his production, he had to show the council that the expansion would generate a profit, otherwise they would not accept it. He was very appreciative of this council, since they ensured new investments were economically appropriate (farmer A, 2/3). Having a profitable farm was a goal for all farmers, but especially farmer D and farmer F aimed towards an efficient and profitable production. Farmer D (11/3) had the goal of having some of the most efficient pigs in Sweden (pigs gaining as much weight as possible on as little feed as possible), while farmer F (8/3) considered profitability as one of the main drivers in his work at the farm. These two farmers were also among the youngest, and they did not express the same emotional connection to their farms as some of the older farmers did. This might suggest that younger farmers are generally more focused on the farm as a business instead of a lifestyle.

### **Specialization of knowledge**

Farmers are becoming more and more specialized (Gliessman 2015). Today, most farmers have one type of production that they focus on and this requires specialized and in-depth knowledge about that particular type of production. According to farmer C (4/3), knowledge was a key element in becoming a successful farmer:

... It is very much theoretical knowledge today that affects how successful they are as businesses.

Farmer A (2/3) expressed a similar view and found it necessary to import knowledge from consultants in order to optimize his production. He felt it was too much for him, if he had to have specialized knowledge about everything in his production. Therefore, he had consultants specialized in certain areas (e.g., asparagus or raspberry) that advised him. Farmer F (8/3) had a similar opinion and found it unnecessary to learn the knowledge himself, when there were advisors 'who knew better'. He could simply ask and then implement the knowledge:

... But there are so many you can ask about certain things. There are advisors, Lantmännen has one who is good and if you have any worries, well then you call him and then he comes and looks at the carrots. 'Yes, what do you think we should do here?'. [Then he says] 'Yes, but do this'. Then you just have to do that... It is unnecessary to invent the wheel 7-8 times if somebody else has already done it. So I think you should do that. There is always someone who knows it better.

This type of knowledge 'import' was in opposition to farmer B (9/3), who felt GFs need to have knowledge about a lot of areas, because they have no others than themselves to turn to:

You are not really good at anything, but quite good at everything. That is often how it goes. And you have to.. But I guess it is like that with all farmers, if you compare them with, I know people who are not farmers, and then you feel like 'god damn, how

little they know'. They can't do anything!... Farmers, they are.. They must be the best employees in the world... They are so used to solving everything themselves. You only have yourself to go to.

All farmers used consultants in varying degrees, however, it was clear that some struggled with combining 'imported' specialized knowledge, which is necessary to optimize their production and being an independent farmer (farmer B, 9/3; farmer C, 4/3; farmer E, 14/3; farmer H, 14/3). However, according to farmer E (14/3), certain skills and knowledge within farming cannot be taught; it is more like an intuition you are born with. He explained he felt he had a certain 'eye' for his cows and could therefore act at the right time (e.g., if a cow was in heat or feeling unwell). Besides consultants, all the farmers gained new knowledge from colleagues, organizations such as Hushållningssällskapet or LRF and/or agricultural magazines. Some of the older farmers mentioned there used to be more meetings where you could exchange knowledge (farmer A, 2/3; farmer B, 9/3; farmer C, 4/3). Today there were more courses providing knowledge necessary for their production such as certification courses linked to pesticide use or new standards from the EU that had to be fulfilled to get subsidies. All of the farmers were 'forced' to continuously participate in courses with this type of knowledge, which made it more an obligation than a voluntary act. Several of the farmers resented the fact that they had to receive this knowledge 'from the top' (farmer B, 9/3; farmer E, 14/3; farmer G, 15/3; farmer H, 14/3). They felt that most of the rules and certification processes were unnecessary, and that the authorities degraded some of the farmers' own knowledge. On the other hand, farmer A (2/3) believed that the knowledge level of a lot of farmers was low, but that they were struggling just to keep their production going, and therefore had no time to educate themselves. Regardless, to be a GF on Gotland today means to have a great amount of knowledge in certain areas, whereas previously a more general knowledge about farming was required.

### **Work according to the farmer's code**

Farmer C (4/3) was the first farmer who mentioned 'the farmer's code', which was a set of rules that GFs should aim to work by. He explained it like this:

One should cultivate one's production according to 'the farmer's code'. It meant that the soil should not be destroyed, it should not... be overgrown by weeds and it should not be overgrown by bushes and trees... That is part of what I consider as sustainable... Trenches and fences and buildings should be kept in order so they do not decay.

Working according to the farmer's code meant to keep fields and facilities tidy, to take care of the soil and livestock, and to pass the farm on to the next generation in the same or even a better shape than the earlier generations had (farmer B, 9/3; farmer C, 4/3). Only two farmers actually mentioned the farmer's code, but it was obvious that all farmers linked tidiness and caretaking of soil and livestock to being a GF. Tidiness of the farm and on the fields were seen as symbols of a healthy economy, good farming skills, high yields and hard work (farmer B, 9/3; farmer C, 4/3; farmer E, 14/3; farmer F, 8/3; farmer G, 15/3). Most farmers kept an eye on how neighbouring farms looked,

but this was more seen as a ‘work injury’ than a conscious act on its own. Farmer B (9/3) explained that word traveled fast, if he were to make mistakes in the fields, although it was a kindhearted sort of gossip. Farmer G (15/3) was the only farmer who valued healthy crops and tidy fields the highest; he would not at any cost cut down on input or practices that could cause his crops to give a reduced yield. His consultant had advised him to minimize some inputs, but the symbolism of having tidy fields and healthy crops was too important to him. The other farmers found straight ploughing lines and weed-free fields important, but not to the same degree previously (farmer B, 9/3; farmer C, 4/3; farmer F, 8/3; farmer G, 15/3). According to farmer F (8/3), the youngest farmer, the prestige of straight ploughing lines was not as important as it used to be partly because of GPS technology:

The older generation is very much like, there is a lot of prestige in what you go. The ploughing has to be straight, the driving has to be straight, it has to look good. But I usually say that the grain does not grow better just because you have been driving straight or crooked. It does not care... No, but the older generation you can really feel it... There is some kind of professional pride that exists, it has to be a bit like that. But now, it is not a sport anymore when you have GPS.

This is a clear example on how technology can absorb skills that used to be important as a farmer. Farmer G (15/3), who found straight ploughing lines extremely important, tried to counterwork the mechanization of ploughing by insisting that his employee knew how to plough without GPS. He found GPS a useful tool, but believed that GFs knew how to handle agricultural machinery without too much help from technology. He also argued that GFs know their soil, and that technology can never fully replace farmers, because they know their landscape and their soil the best. Some farmers saw tidy fields as ‘the right way’, because they produced the highest yield (farmer B, 9/3; farmer C, 4/3; farmer F, 8/3).

Taking care of the soil and livestock (those who had that) were also part of the farmer’s code. The practices of taking care of the soil differed among the farmers, but they aimed for increasing the organic material, returning nutrients to the soil and fertilizing it as precisely as possible. It was very important for all of them to *not* impoverish the soil. This is probably because impoverished soils do not produce well, but also because the soil has to maintain its fertility for the next generation (the farmers’ children or the next farmers). According to farmer B (9/3), the farm was a relay, meaning that farmers were merely caretakers, not owners, of the place. It was not important for all the farmers that their children inherited the farm (one was actually against it, since he did not think all his work had been worth it), but some tried to create opportunities at the farm for the next generation (farmer B, 9/3; farmer C, 4/3; farmer F, 8/3; farmer H, 14/3). If the farm had been in the family for several generations, there was more pressure that it had to stay in the family. Farmer E (14/3) had experienced a lot of stress, when he had to sell some land in order to pay for parts of his new livestock stable. Selling land was one of the worst things he had to do. He felt that he let down his ancestors and worried what other farmers might say:

At the end there was one at the bank who thought ‘well you have quite a lot of forest, go ahead and sell a bit’. Yes, and then I got completely destroyed and broken about that and thought that it was sad. And I thought about what my ancestors and everything would have said and the like.. So, it was with a lot of grief that I accepted that. But with the result in my hand, it was a good business... I felt like a worse person of course. ‘And what will people think?’. You know, it comes back around. ‘Look at him, things aren’t going that well now, huh? Now he is forced to sell’.

According to him, his sale was the start of a trend on Gotland. If farmers need money now, they can sell some land. But he would *never* sell the parts of the land which has been in his family for the longest time. Then ‘they would have to drag him out first’. Although he was the only farmer expressing such a close connection to the land his family had owned for generations, most farmers would agree that selling their farm and/or land would involve a lot of negative feelings. The farmer’s code is therefore also about keeping the land in the hands of family or people who wish to take care of it. Farmer B (9/3) said that GFs look down upon people who buy a farm, overexploit its resources and then leave again, since this is not in line with the farmer’s code.

In order to have healthy livestock that produced well, a GF took good care of their livestock (farmer C, 4/3; farmer D, 11/3; farmer E, 14/3). The livestock should always come first and the farmer was fully responsible for the welfare of the livestock. Both farmer B (9/3) and farmer E (14/3) expressed a strong commitment to their livestock and their farm, and could not see themselves leaving, even if the Russians invaded Gotland (which was a small risk at the time of the fieldwork). A good livestock farmer had ‘a good eye’ for the livestock in order to make sure what and when certain things had to be performed (farmer B, 9/3; farmer C, 4/3; farmer D, 11/3; farmer E, 14/3). Farmer E (14/3) never left anything up to chance, when it came to his livestock, and he would rather call the vet once too often. All farmers perceived livestock as a link to take care of the soil, and all of them used livestock manure on their fields.

### **Keeping track and having timing**

Several farmers claimed timing was one of the most important skills of a GF (farmer B, 9/3; farmer D, 11/3; farmer E, 14/3; farmer F, 8/3; farmer H, 14/3). Keeping track of the production enabled them to do the right things at the right time, which could optimize their production. Agricultural work could not be planned into detail, because the weather (and other factors) determined which tasks should be performed at certain times. Examples are that the fertilizer should be spread on the field just before a rain, and that the grain should be harvested before heavy rain. Therefore, having good timing could be essential for an optimal production. Farmer E (14/3) explained:

You have to have timing in everything... That’s the way it is. You cannot drive out in a field and try to do a job after a heavy rain. Then there are going to be problems.

Timing was something that the farmers could learn from experience, but circumstances change from year to year. Farmer H (14/3) expressed how difficult it was to have the right timing, because factors such as the weather, market prices and pests could have an effect on which practices were right at a certain time. Last year they got almost no rain in their part of Gotland (south western

Gotland), while farms in the northern part of Gotland had harvested extremely high yields. Other farmers explained how climate change made the weather more unpredictable, or how market prices fluctuated from year to year (farmer C, 4/3; farmer D, 11/3; farmer E, 14/3). Having a production with that many uncertain factors, forced the farmers to be in control of things they knew, e.g., keeping track and trying to act at the right time. If a farmer was struggling to survive financially, good timing could be crucial, since it had an impact on the quality of the produce. However, several farmers mentioned they tried to become more resilient and less dependent on perfect timing. Some had built water ponds to be able to irrigate during droughts (farmer A, 2/3; farmer F, 8/3; farmer G, 15/3), while others used technological tools in their livestock production to predict animal behavior (farmer D, 11/3; farmer E, 14/3). All farmers expressed humbleness towards the fact that farming is a business with a great deal of unpredictability. It was, nevertheless, very clear that having good timing was part of being a GF. Farmer F (8/3) and farmer G (15/3) explained that organic farmers face an even higher level of unpredictability, so that was one of the reasons they wished to stay conventional.

### **Food producer and the ‘feed the world’ narrative**

When asked which function their farm had in society, all farmers answered that the main function was to produce food. Being a food producer is generally tightly intertwined with being a GF (Burton et al. 2021), and the Gotlandic farmers stated this in more than one way. First, several of them argued that it was conventional farmers who produced the highest yield in the most efficient way compared to organic producers (farmer A, 2/3; farmer B, 9/3; farmer C, 4/3; farmer F, 8/3; farmer G, 15/3). According to them, farmers had a duty to ‘help feed the world’ and this was done through conventional farming, not organic farming. Farmer C (4/3) mentioned that a large part of the world’s population has to attain a better living standard, and the West should therefore not ‘cut back’ on their food production (by going organic). Farmer B (9/3) found organic farming inefficient and spoiled:

Food has to be produced, we are only getting more and more. If everybody is organic then it is doubtful whether.. We might not starve to death here on Gotland, or in Sweden or here in the West. But.. I can say that sometimes it feels like a luxury to not utilize everything that you do not... Once you have killed a pig, then you make use of everything... Then it is your duty to make use of everything. You do not throw away half of it, just because you think it is disgusting.

A similar view was shared by farmer A (2/3), and he argued that future agricultural practices will be determined by how many people there will be on the planet. The narrative of ‘feed the world’ was clearly seen among almost all farmers, when they talked about GFs, sustainability or the future of agriculture. It is deeply rooted in most conventional farmers and an important part of being a GF. In addition, when discussing the new CAP reform, a number of farmers expressed that the war in Ukraine might have a positive effect on the CAP, because it made politicians realize how important food production is (farmer B, 9/3; farmer E, 14/3; farmer G, 15/3). Farmer G (15/3) joked that EU politicians had started to understand that the CAP has to focus on food production, and not only ‘flowers in field edges’, and subsidizing farmers who ‘take their land out of production’. Again, agricultural practices which did not produce food the conventional way were perceived as ‘spoiled’

and not important in times of crises. Farmer E (14/3) indicated that food production should be the top priority right now:

We are going to pause that for a while [the CAP negotiations], because now we have to get enough food for our population, because that is also how it is going to be. And we might have to send food to Ukraine. And then we must help to produce that food.

All farmers saw efficient food production as the backbone of agriculture and of being a GF. A farmer who utilizes his soil efficiently and helps to 'feed the world' was a GF. Policies, practices or farmers who did not have this motive were seen in a negative light

### **Work ethic and cooperation**

Tidiness, healthy crops and high yields were seen as symbols of agricultural skills, but so was also hard work. Several farmers believed hard work is a fundamental part of being a GF, and those who do not work enough will not be able to keep their farm (farmer B, 9/3; farmer D, 11/3; farmer E, 14/3; farmer H, 14/3). Farmer B (9/3) said that the best farmer he knew worked 18 hours a day, but was also humble to the fact that it might not work in the long run:

But it is, it is a kind of 'work damage' you have. Those who work a lot are those who are good... The best farmer I know is my neighbour... He has 10 times as much as I do... But he manages that and he is really good. But he probably works 18 hours a day. And that might not be right, it is not really that good either. But he does.

Farmer E (14/3) stated that GFs work hard *all* year, and he found it difficult to reconcile with grain farmers (farmers who had no livestock), since they 'only work 3 months a year'. All farmers expressed the workload varies with the seasons, and some periods demand harder work than others. Nevertheless, the farm always comes first, especially if there are livestock on the farm. This could have a damaging effect on personal relationships, which some farmers expressed (farmer A, 2/3; farmer C, 4/3; farmer E, 14/3). Farmer A (2/3) explained how the farm had affected him:

... But this farm has actually cost me 3 relationships. That's how it is. And it is not weird, you know, because during the entire growing season everything is on my terms. We can decide at home that we are going to a barbecue or something like that. [But then] 'No it is going to rain tomorrow', then I have to do the job. There is no way out of it.

Dedication and hard work is necessary on a farm, since a wide range of factors can affect the production (e.g., livestock illness, sudden weather change, pests, etc.). However, hard work alone was not enough to be a GF; it had to be connected to some of the other characteristics of being a GF. Both farmer C (4/3) and farmer G (15/3) stated that working around the clock is unnecessary, if the farmer does not know how to be a good businessperson or work with what he has got.



Some of the farmers saw cooperation as part of being a GF. Three of them co-owned agricultural machinery and had to cooperate when they wanted to use them. Farmer C (4/3) valued this collaboration and believed that it made the farms more resilient:

Then, we have cooperation to a large extent with several others, mainly with machinery... And that is also such a capacity that we value highly, that you can cooperate. And that makes you a bit more insured to accidents and needs. You do not stand alone.

Farmer B (9/3) also cherished the cooperation, especially in times of crises, since ‘help was only a phone call away’. During the drought in 2018, several of the farmers had helped each other out by e.g., sharing feed for their livestock or working at each other’s farms (farmer B, 9/3; farmer C, 4/3; farmer E, 14/3; farmer H, 14/3). Although farming is a profession where the farmer mainly works on his own, cooperation has clear benefits, and it was important for the farmers to have ‘colleagues’ they could communicate and work with. Especially the older farmers valued cooperation. However, as the number of farmers is decreasing, and the farmers who are left become more industrialized, it is difficult to have cooperation and time for ‘colleagues’. Farmer G (15/3) said:

... I have one up here, he calls quite often, he is 78 years old. But then you stop at the edge [of the field], when you meet on the field and you go out and chat for a bit. But a lot do not do that, they just drive on. It is like.. Yes, they do not have time for that. They sit with their phones and talk and drive... It is a bit of fun when you can stop on the field sometimes and have a cup of coffee, but that is happening less often the fewer farmers we become. And that is not only on Gotland.

Farmer A (2/3) mentioned similar episodes: farmers used to meet up much more and discuss different topics or practices, but that this has disappeared due to limited time and fewer farmers. It did, however, seem like the farmers collaborated and helped each other out in times of crises, and therefore cooperation was also part of being a GF.

## **A GF on Gotland**

According to the interviewed farmers, a GF on Gotland is a farmer who is business orientated and has a certain amount of specialized knowledge. He works according to the ‘farmer’s code’ by taking care of the soil and livestock and passes the farm on to the next generation in the same or in a better condition than when he got it. He works hard, often alone, but can also cooperate. He keeps track of his production and has good timing in everything he does. He is a food producer, who helps to ‘feed the world’. Some of these characteristics have visible symbols tied to them, but not all of them. In table 3 below, the link between the visible symbols and GF-values can be seen. The type of cultural capital can be seen as either I (institutionalized), O (objectified) or E (embodied).

Table 3. The connection between GF-values and their visible symbols.

| Visible symbols                      | GF-values                   |
|--------------------------------------|-----------------------------|
| Healthy crops, healthy livestock (O) | - Specialized knowledge (I) |
|                                      | - Farmer's code             |
|                                      | - Skills                    |
|                                      | - Hard work                 |
|                                      | - Having timing             |
|                                      | - Keeping track } (E)       |
| Tidy fields (O)                      | - Farmer's code             |
|                                      | - Skills                    |
|                                      | - Hard work                 |
|                                      | - Having timing             |
|                                      | - Keeping track } (E)       |
| Tidy farms (O)                       | - Farmer's code             |
|                                      | - Good economy              |
|                                      | - Skills                    |
|                                      | - Hard work                 |
|                                      | - Keeping track } (E)       |
| Modernization of farms (O)           | - Farmer's code             |
|                                      | - Business orientated       |
|                                      | - Good economy              |
| Utilization of land use (O)          | - Farmer's code             |
|                                      | - Food producer             |

### Productivist farmers

The Gotlandic farmers generally fit well within the category of productivist farmers as defined by Burton (2004, p. 198):

... I use the term 'productivist' to encapsulate the overwhelmingly utilitarian approach to land use based on intensive forms of agricultural production (and accompanying attitudes, goals, roles and behaviours) that results in a uniform landscape...

A GF within this category has the main goal of an efficient and rational production that produces food for the world (Burton 2004). All the interviewed farmers shared this goal, although some more than others. The symbols of GF for the Gotlandic farmers were similar to most of the classic symbols for productivist farmers; tidy fields, high yields, hard work and healthy crops. These symbols of objectified cultural capital were produced through embodied and/or institutionalized cultural capital. Saunders (2015) found a similar mindset at other Swedish conventional farmers.

The stories, which the Gotlandic farmers told of the previous generations, gave the impression that farmers are generally becoming more and more utilitarian. The 1950'ies were a starting point for the industrialization of agriculture and the narrative of 'feed the world'. Those two elements had a heavy influence on what it meant to be a GF in those days (IPES 2016; Burton et al. 2021). Since then, factors such as globalization, commodification of food, subsidies from the EU and Big Ag have influenced what a GF is today. All these factors have generally pushed farmers toward

increased rationalization and efficiency. If farmers want to survive as food producers in the global food market, they are forced to become more efficient, rationalized and focused on profitability. The treadmill of production is spinning faster due to increasing competition, and those who do not run fast enough will fall off (Bell 2004). This is not to say that farmers today do not value ‘older’ virtues such as family farming, traditions or cooperation, because they do. It is just that the overall economic system forces them toward specialized and rational production systems (and the inherent virtues of these). According to Sutherland (2013, p. 433), some of the GF-values are generated by necessity:

The typical symbols of ‘good farming’, such as high yields and good quality livestock, have historically also led directly to higher economic returns, suggesting that commercial farmers express the taste of necessity in their socialized preferences.

This necessity was evident when the Gotlandic farmers talked about livestock breeding (‘a good cow is a productive cow’), straight ploughing lines (‘it gives the best yield’), tidy farms (‘the bank is more willing to help a tidy farm’) and so on. GF-values are to a large extent shaped by the economic reality that farmers are in. However, farmers who are overly profit orientated are not seen as GFs either (Burton et al. 2021; farmer B, 9/3; farmer E, 14/3). Due to this, GF-values can be seen on a continuum between luxury (extreme tidiness, new machinery, higher input than necessary) and necessity (healthy crops and livestock, profitable yields) (Burton et al. 2021). Nonetheless, most of the Gotlandic farmers expressed themselves in a way that would put them close to necessity on this continuum; they were very aware and shaped by the economic situation they were in. Several of them mentioned that most farmers were just trying to survive, and that the rising prices on input caused them a lot of stress (farmer A, 2/3; farmer B, 9/3; farmer C, 4/3; farmer E, 14/3; farmer H, 14/3). Only one farmer seemed to be closer to luxury on the continuum; he valued several things over profitability (farmer G, 15/3).

## **The Gotlandic farmers’ views on sustainability**

The GF-values of the Gotlandic farmers was in line with the productivist mindset, which most conventional farmers have. Yet, sustainability was important for the Gotlandic farmers as well. However, their definitions of it and the practices they used to achieve it, were very different from the definitions and practices usually applied in agroecology.

### **Sustainable agriculture according to the Gotlandic farmers**

When asked to explain what sustainable agriculture meant to them, the Gotlandic farmers generally gave answers which related to circular nutrient cycles, increasing the organic matter in the soil, the necessity of livestock, precision farming and technical progress. All the farmers which had livestock produced most of the feed themselves, and they used the manure to fertilize their fields. The bedding from the stables and some plant residues were also returned to the soil and used as a way to increase the organic matter (farmer B, 9/3; farmer C, 4/3; farmer D, 11/3; farmer E, 14/3; farmer G, 15/3; farmer H, 14/3). Having cultivated grassland was seen as a way to ‘restart’ the soil,

and the pig producers envied that cattle farmers could have cultivated grassland in their crop rotation (farmer D, 11/3; farmer H, 14/3). The farmers, which had no livestock, imported livestock manure from nearby farmers (farmer A, 2/3; farmer F, 8/3). No farmer believed that sustainable agriculture was possible without livestock. All these practices were a way for the farmers to aim for a circular nutrient cycle, although all of them used additional artificial fertilizer and imported feed. Some tried to avoid nutrient leakage or overfertilization by having field edges (farmer A, 2/3; farmer C, 4/3; farmer D, 11/3). However, all aimed for using an accurate amount of fertilizer for economic and environmental reasons. Farmer G (15/3) was the only farmer, who explicitly talked about precision farming, but all farmers used tools such as soil mapping, plant analysis and GPS technology. These tools enabled them to apply a precise amount of fertilizer, pesticides, water and so on. This aim for precision was clearly linked to efficiency and rationality. The farmers were generally positive to technical improvements within agriculture, such as electrification of machinery, increased precision technology and tillage practices which disturbed the soil as little as possible.

Some farmers also linked sustainable agriculture to the farmer's code, specialized knowledge or modernizing the farm (farmer A, 2/3; farmer B, 9/3; farmer C, 4/3). Farmer B (9/3) defined sustainability in terms of 'surviving' as a farmer:

Yes, sustainability is to be a farmer even next year. That you survive as a farmer.

Others started to criticize organic farming as soon as the questions led into areas of sustainability. As mentioned earlier, organic farming was seen as inefficient and dependent on input from conventional farming. Farmer C (2/3) saw organic farming as merely a business idea, and farmer G (15/3) accused some organic farmers of impoverishing their soil. Although all farmers believed there was a need for both organic and conventional farming, it was obvious that none of them thought organic farming was more sustainable than conventional farming. There was also a frustration of how organic farmers were shown in the media as 'good', while conventional farmers were shown as 'bad' (farmer C, 4/3; farmer F, 8/3; farmer G, 15/3). Some farmers agreed that conventional farmers had overfertilized their soils or used too toxic pesticides in the past, but that this was not the case anymore (farmer A, 2/3; farmer B, 9/3; farmer D, 11/3; farmer F, 8/3). Farmer A (2/3) saw no risk with today's pesticides:

When I started, all those substances that existed then, were gone. And they were also too good. They were too toxic. So now it is something completely different, and I see absolutely no danger [with pesticides]... Like the plant protection inspection, they pour and test and everything like that, there is nothing that has any significance.

All farmers received subsidies in varying degrees from the EU. When asked about the greening subsidies and/or AESs, the farmers generally expressed reluctance towards them. They had experienced that some of the greening practices were not worth the subsidies; catch crops turned into weeds, which demanded higher levels of tillage or pesticides. The strict bureaucracy could also counteract the practices (e.g., when authority officers judged that flower strips were 20 centimeters too narrow) (farmer C, 4/3; farmer F, 8/3; farmer G, 15/3). However, having cultivated grassland

was seen as a positive practice and establishing field edges as well (farmer A, 2/3; farmer C, 4/3; farmer D, 11/3; farmer E, 14/3; farmer F, 8/3; farmer G, 15/3; farmer H, 14/3). Farmer A (2/3) was the only one who mentioned the importance of insects, while farmer C (4/3) expressed joy, when he saw certain types of wildlife in his field (positive to pheasants, but not to deer). Economic aspects were mainly the reason for implementing more sustainable practices, and the farmers rarely saw or mentioned the biological benefits of them. Farmer E (14/3) gave the impression, it was important for him that farmers around him had succeeded with more sustainable practices, before he started with them himself.

A wide range of factors, such as education, heritage, production type, current debates and necessity have influenced how the Gotlandic farmers defined sustainability. Although their definitions and practices varied, there was a certain dichotomy to be seen among all of them: high yields, efficiency and the narrative of ‘feed the world’ were put in opposition to organic production or practices that are more ecologically sustainable, since they could not ‘feed the world’. Some farmers even made it sound like organic farmers had *no* tools to handle pests on their fields. Farmer G (15/3) stated:

.... We have to produce food as well. We cannot stand there without rapeseed oil, because there were rape pollen beetle this year. ‘Sorry, there is nothing’. The shelves in the stores are empty and there is no fuel, because of the rape pollen beetle. That insecurity, I am not sure if people are ready to have that in this country. But I don’t think people have thought that far ahead. Because that is how it is. Is there a year with, yes, for instance pests, well then that is how it is and then it is everywhere or there is nothing.

Farmer F (8/3) said a similar thing and this sort of dichotomy was quickly seen in all farmers, when questions of sustainability were asked. Still, some farmers believed that both organic and conventional farmers could learn from each other, but that both forms of production should exist on equal terms (farmer A, 2/3; farmer C, 4/3; farmer F, 8/3). Table 4 below shows the features of sustainable agriculture according to the farmers and the applied practices.

Table 4. Features of sustainable agriculture and applied practices.

| Sustainable agriculture features | Practices   |
|----------------------------------|---|
| Circular nutrient cycle          | Fertilizing with manure from livestock and artificial fertilizer, precise fertilization, biogas, returning plant residues, self-sufficient on livestock feed, field edges |
| Increase organic matter          | Returning plant residues and stable bedding, using manure from livestock, having cultivated grassland   |
| Having livestock                 | Grazing on cultivated grassland, using their manure   |
| High yields                      | Precise fertilization with livestock manure and artificial fertilizer, pesticides, technical tools such as GPS or soil mapping  |
| 'Feed the world'                 | Conventional agriculture since it produces the highest possible yields  |
| Efficiency                       | Precision farming, modernizing farms and systems, having modern livestock breeds  |
| Technology, machinery            | Electrification, AI, GPS, soil mapping, plant analysis  |

### Different notions of sustainable agriculture

It can be hard to find similarities between agroecologists' definition and the Gotlandic farmers' definition of a sustainable agriculture. Whereas the agroecologists define sustainability in terms of diversity, multifunctionality, short supply chains and low inputs, the Gotlandic farmers define it more in terms of precision, technology intensive and high, necessary input. One can say that the

agroecological definition has a more holistic perspective, while the Gotlandic farmers define it in a specified and reductionist way. Both definitions include ‘feeding the world’, but have very different views on how this is achieved. Also, some of the features and practices of the Gotlandic farmers are in fact valued and used by agroecologists (e.g., nutrient circulation or increasing the organic matter), but in ways and scales that differ from the Gotlandic farmers. Nevertheless, the important aspect to remember is that the Gotlandic farmers are heavily bound by necessity: they are producers within an economic system which forces them towards increased efficiency, uniformity and rationalization with the aim of high yields and having a profitable farm. Those who do not follow this general course will face financial (and other) struggles, which few farmers can afford. As farmer B (9/3) said, sustainability is linked to ‘surviving’ as a farmer. This is not to say that the practices of precision farming or ‘soil mapping’ are wrong, but according to agroecologists a much more holistic approach is necessary in order to achieve sustainability.

## **How GF-values affect sustainability**

GF-values are constantly in a mode of change, since they are always affected by the farmer’s social, economic and ecological surroundings. Still, a majority of farmers view resistance to change as a part of being a GF (Burton et al. 2021). Some of the Gotlandic farmers also expressed this (farmer B, 9/3; farmer E, 14/3; farmer G, 15/3). However, GF-values have been and will be affected by debates, policies and initiatives concerning agricultural sustainability. But how do the GF-values of the Gotlandic farmers affect the path to a sustainable agriculture?

### **GF-values’ compatibility with sustainable agriculture**

The GF-values of cooperation, working hard, having timing and keeping track of the production are also part of what could be considered a good agroecological farmer. Good timing can actually be more important for agroecological or organic farmers, since they do not have the same tools to handle pests or weeds. Farmer F (2/3) explained that the ‘window’ organic farmers have to get certain things done is a lot smaller than the ‘window’ conventional farmers have. He had, for example, two weeks to spray pesticides on some of his fields, while organic farmers might only have a few days to mechanically remove the weeds, before they got too big. Cooperation is highly valued in agroecological farming and elements such as farmer networks, co-ownerships and collaboration with local businesses are encouraged. Therefore, these values do not stand in the way of sustainability. It is more the visible symbols of GF, and the narratives of ‘feed the world’ that can stand in the way of a more sustainable agriculture.

### **Visible symbols of GF and sustainability**

The visible symbols of GF for the Gotlandic farmer are: Tidy fields and farms, healthy crops and livestock, modernizations of farm buildings and utilization of land use. Tidy fields mean no weeds, straight ploughing lines, monocultures and utilizing each field as much as possible. The crops in these fields should be visibly healthy, uniform and generate a high yield. All these symbols are linked together; within conventional agriculture, a healthy and uniform crop agriculture demands

tidiness, high inputs (fertilizer, pesticides etc.), monocultures and precision. The practices which enable the tidiness are extensive tillage and chemical inputs. The monocultural landscapes also allow farmers to easily judge other farmers' skills, since the symbols can be observed from a distance (Burton and Paragahawewa 2011). However, these symbols, and the practices they require, are generally not ecologically sustainable; Pesticides and tillage damage soil health, monocultures decrease biodiversity and make the agrosystem less resilient, artificial fertilizers can cause eutrophication and so on. Therefore, the GF-symbol of tidy fields has an inhibiting effect on implementation of sustainable practices. In agroecological agriculture, there are a different set of symbols which require sustainable practices. Polycultures and diversity are central and a certain level of 'messiness/wilderness' is accepted or even viewed as beneficial. A healthy crop is grown by having a rich soil life, beneficial polycultures and possibly small inputs. The symbols of agroecological agriculture differ greatly from conventional agriculture and can even stand in opposition to each other. Wilderness, polycultures and/or weeds are seen as 'bad farming' by conventional farmers. The diverse landscapes are also harder for them to judge compared to monocultural landscapes. Burton and Paragahawewa (2011, p. 99) states that:

... Complex landscapes with high biodiversity are likely to be inaccessible from a distance - the symbols are simply too small to be read from a distance in the same way that conventional farming activities can be read...

The GF-value of tidiness is not only connected to necessity. The farmer's code also advocates for it; tidiness is seen as taking care of the land and utilizing it. Weeds, letting things grow wild or perennials on fields are generally viewed as 'neglecting' the land. Farmer C (4/3) explicitly connected tidiness to being a GF and sustainability, and mentioned several times that 'letting things grow wild' is not compatible with being a GF. This opinion is confirmed in several other studies about GF-values (Burton 2004; Burton et al. 2021; Saunders 2015; Westerink et al. 2021). Saunders (2015, p. 402) did a study on Swedish conventional farmers and found that:

Among the conventional farmers interviewed, farmers who leave weeds in the field, planting what are deemed to be messy perennial covers, are still likely to be seen as 'neglecting' their land rather than practising good or responsible farming.

Therefore, the Gotlandic farmers were reluctant to implement practices, which would counterwork field tidiness and the farmer's code. Reasonably, none of them wish to perform practices which are perceived as 'bad farming' or neglecting their land. Although none of the Gotlandic farmers actively 'kept an eye on each other', words traveled fast if one of the farmers made mistakes in the field. Therefore, implementing sustainable practices involves risks on a social level: It can lead to exclusion from other farmers and create negative feelings concerning the farmer's own identity as a GF. In Bourdieusian terms, the farmers risk losing social and cultural capital, if they fail to show the visible symbols of GF-values.

It has to be noted, there is of course also an economic risk if the farmers wish to implement sustainable practices. It can take a lot of investment, and the first couple of years may generate low yields due to e.g., increased weeds or the implementing new practices. In order to minimize this



economic risk, the EU has tried to subsidize farmers towards more sustainable practices via AESs. They have had a varying effect, both ecologically and culturally (Burton and Paragahawewa 2011; Scown et al. 2020; Westerink et al. 2021). There are also practical implications of implementing sustainable practices, which several of the farmers also mentioned. Farmer C (4/3) had experienced that catch crops turned into weeds and farmer G (15/3) concluded that catch crops or cover crops were not economically feasible. However, facing both social and economic risks makes it even harder for farmers to change their practices.

### **Being a ‘bad farmer’**

In order to understand the social risks of displaying certain sustainable practices, it can be helpful to illustrate the process via the identity theory model. Figure 4 and 5 below shows two different scenarios.

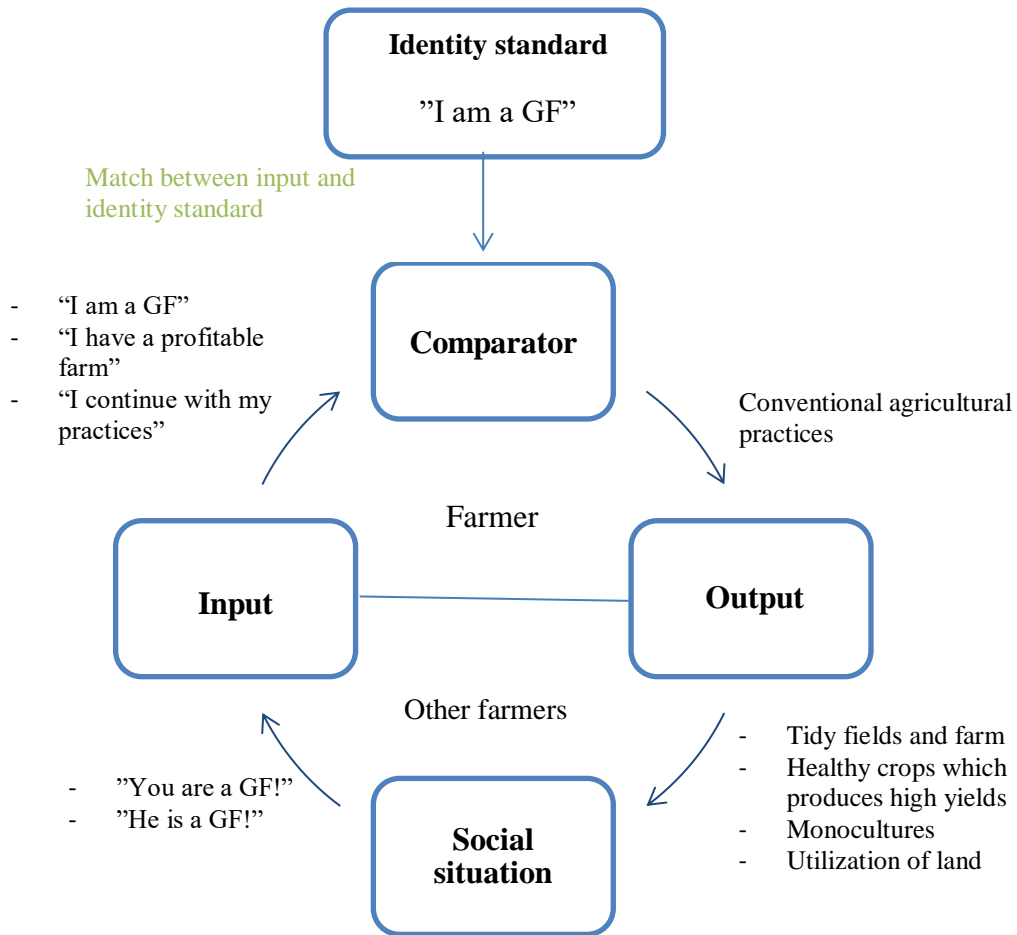


Figure 4. The identity standard and the comparator component match.

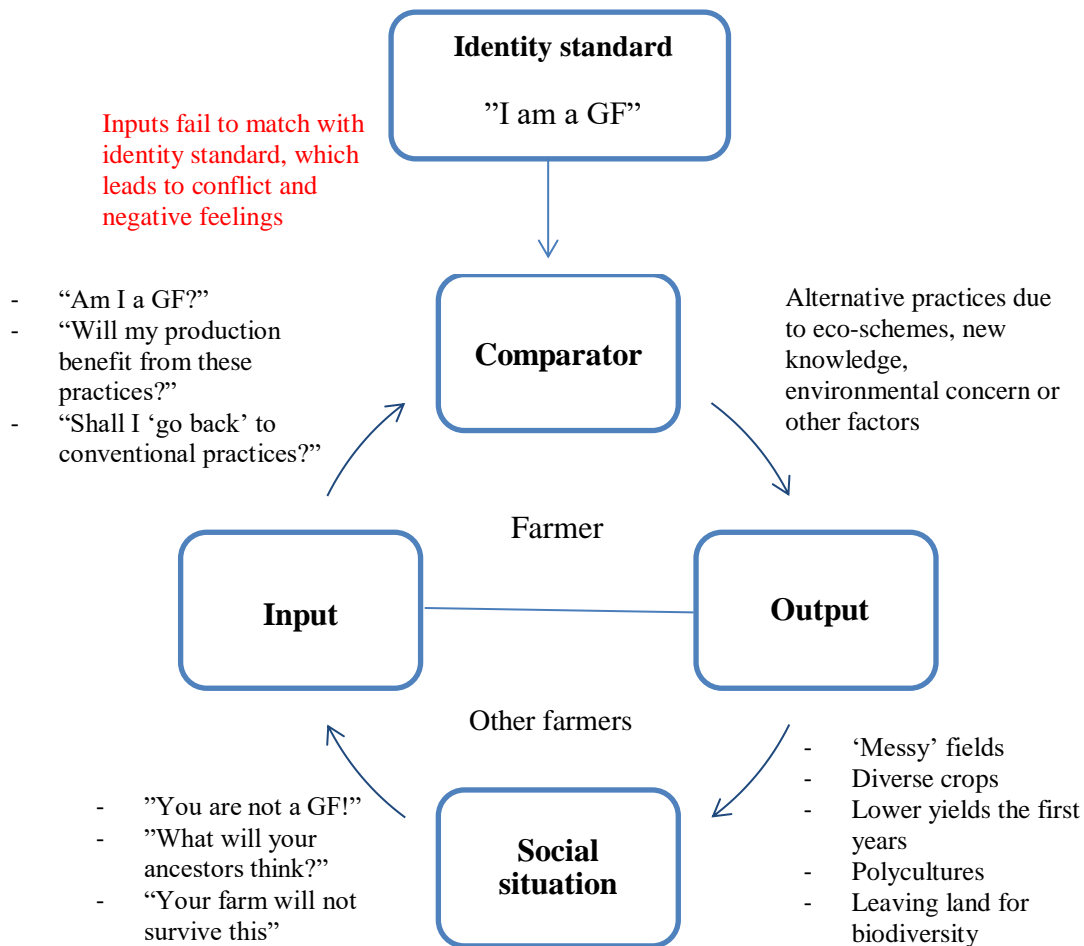


Figure 5. The identity standard and the comparator component do not match.

Figure number 4 shows when there is a match between the input and the identity standard, and the farmer's behavior is encouraged and therefore continued. Figure number 5 shows the opposite case when internal conflicts and negative feelings arise due to the discouragement from other farmers. This inhibits the continuation of sustainable practices. When adding other obstacles to sustainable practices, such as practical issues or small economic margins, it is not difficult to understand why farmers show such hesitation towards them. A loss of GF 'capital' is hard enough in itself. However, the Gotlandic farmers also stated that farmers were allowed to experiment and find out what works for them. Therefore, the figures may oversimplify the process farmers go through, when they fail to show visible GF-values.

### 'Feed the world' narratives and sustainability

The narratives of 'feed the world' also caused the Gotlandic farmers to hesitate towards more sustainable practices. As mentioned earlier, all the Gotlandic farmers argued that conventional agriculture was the only way to produce enough food for the world's growing population. Organic or alternative production systems were seen as an inefficient way to utilize the land, and these

systems ‘could not feed the world’. A dichotomy was created; ‘feeding the world’ with conventional agriculture stood in opposition to organic or alternative production systems, which may have ecological benefits, but fail to ‘feed the world’. However, the narratives of ‘feed the world’ are highly flawed as well as the idea that conventional agriculture ‘feeds the world’.

According to IPES (2016), the narratives of ‘feed the world’ argue that in order to deliver food security the total production of food has to increase. This has been the main objective of public agricultural policies, and it influences many actors within agriculture. Nevertheless, an increase in productivity has not translated into food security; in 2020, 811 million people faced hunger and 2,37 billion people did not have access to adequate food (FAO et al. 2021). Hunger is a question of distribution, not of global lack of food; the global food system produces more than enough calories to feed everyone on the planet, but fails to give everyone access to it (Holt-Giménez et al. 2012; Gliessman 2015; IPES 2016). In fact small-scale farms feed the majority of the world’s population (ETC Group 2017). Yet, the narratives of ‘feed the world’ continue to exist and influence the entire food system. IPES (2016) has identified these narratives to be one of the ‘lock-ins’ of conventional agriculture, meaning that conventional agriculture is still pursued, despite all the negative outcomes. IPES (2016, p. 55) state that:

These narratives rightly underline the need to think about food security. However, they do so in ways that deflect attention away from the failings of industrial agriculture. These narratives continue to ignore the question of *where* and *by whom* additional food must be produced. The framing of the debate around ‘feeding the world’ pre-disposes us to approach the question in terms of net production volumes of mainly energy-rich, nutrition-poor crop commodities.

More and more studies show that ending hunger is a question of reducing poverty and inequalities (Pretty et al. 2011; Holt-Giménez et al. 2012; Gliessman 2015). The current food system fails to give poor people access to food, and therefore hunger continues to exist despite the high productivity. Increased productivity *can* help to reduce hunger, but only if it generally takes place in countries where hunger exists (primarily countries in the Global South) (Pretty et al. 2011; Holt-Giménez et al. 2012). Therefore, establishing local food systems is a much more efficient way to end hunger than producing more food on a global scale.

Another point to be highlighted is that if the Gotlandic farmers wanted to feed people, they should generally produce food directly for *people* instead of feed for livestock. On a global level, approximately 36 percent of all calories produced are used to feed livestock. Fewer than 10 percent of these are eaten by people as animal-based food calories (Gliessman 2015). In Sweden, up to 70 percent of all agricultural land is used for livestock feed (Jordbruksverket 2020b). This is not to be seen as an argument for veganism or that farmers in Sweden should not have livestock. In countries like Sweden, where livestock has shaped landscapes and has a high cultural value, it is not culturally appropriate to abolish livestock production (and therefore not socially sustainable). In addition, some land types are not suitable for growing crops directly for human consumption (e.g., pastures), and some livestock can sustain or increase biodiversity (Gliessman 2015; Rööf et al. 2015). Livestock manure can also be an essential part of some agricultural production systems,

although there are a variety of ways to maintain soil fertility (Gliessman 2015; Hall and Tollhurst 2015). In addition, livestock manure can never fertilize more land than what is needed to feed the livestock themselves. Nevertheless, producing animal-based calories for human consumption is highly insufficient, and no technical ‘fix’ can reduce this inefficiency as much as producing food directly for human consumption.

Another point to emphasize is that the high yields generated in conventional agriculture are only made possible by a high, external input (Gliessman 2015; IPES 2016). All the Gotlandic farmers had inputs of different kinds, even though they aimed for a closed nutrition circle: Artificial fertilizer, pesticides, feed, fossil fuels, seeds, minerals, etc. These inputs are imported from a global market and some of them require high levels of fossil energy to be produced (e.g., artificial fertilizer). Therefore, the high yields are mainly produced with ‘imported’ energy – not energy from the farm itself or local systems (e.g., photosynthesis or circular nutrient cycles). Not only does this make the production systems more vulnerable, it also challenges the assumption that conventional agriculture is highly productive. When a system’s high output is so dependent on high inputs, can it really be seen as productive? It may also be questioned, whether this type of high productivity is beneficial when it comes with social and environmental costs such as pollution, low income, decreasing soil fertility etc. (Gliessman 2015; IPES 2016). Rodale Institute did a 30-year long study of comparing conventional and organic yields. It showed that organic yields were competitive with conventional yields after 5 years, and during droughts the organic yields were 40 percent higher than conventional. The organic production also generated a wide range of other benefits compared to conventional production (Rodale Institute 2011). Similar studies have, however, shown different results depending on where they have taken place or how holistic their research approach has been (IPES 2016). Nonetheless, seeing productivity in agriculture as merely produced output gives an inaccurate picture. A more holistic approach is necessary in order to understand exactly how productive an agrosystem is.

‘Feeding the world’ is not a question of simply producing more food; it demands much more complex solutions. However, ‘feed the world’ narratives continue to be a navigation point in agriculture. Not only the Gotlandic farmers who mentioned it; it is also found in ads for artificial fertilizer, in agricultural magazines and overheard in debates about future global challenges (Hundebøll et al. 2019; Polfjärd 2020; Yara 2022). Also, powerful actors within the global food system have a particular interest in sustaining these narratives. Partly because they can increase their wealth by using them, but also because they constitute a moral argument for the continuation of conventional agriculture (IPES 2016). The Norwegian chemical company, Yara produces e.g., artificial fertilizer and describes on their webpage that ‘feeding the world’ is their main mission (Yara 2022). According to IPES (2016, p. 58) actors from the input agribusiness are:

... able to take centre-stage in framing the problems (e.g. underlining the global productivity challenge) and providing the solutions (e.g. new ranges of input-responsive crops and breeds), thus securing demand for their products, while ensuring that power and influence continue to flow their way.

There is, of course, a big difference between the motives of these big companies and the Gotlandic farmers. While a company such as Yara wishes to increase profits and power, the Gotlandic farmers saw themselves as food producers who helped to ‘feed the world’. It was part of being a GF. The Gotlandic farmers are in fact food producers, and they do feed a lot of people. But they do not ‘feed the world’. These narratives of ‘feeding the world’ are built on false premises and have to be challenged.

Due to these reasons, the dichotomy described earlier is incorrect and unnecessary. Conventional agriculture does feed millions of people, but not the majority of the world’s population. The high yields come at the price of big environmental and social issues, which risks undermining the very foundation of agriculture (Gliessman 2015). Studies show that alternative production systems have a much bigger chance of reducing hunger, while providing environmental and social benefits to local communities (Rodale Institute 2011; Holt-Giménez et al. 2012; Gliessman 2015). Therefore, these narratives and the idea of high productivity in conventional agriculture have an inhibiting effect on the implementation of sustainable practices at the Gotlandic farmers. The narratives give them a false moral argument to continue their conventional practices despite the negative environmental and social outcomes of them.

### **GF-values and their effect on sustainable practices**

To sum up, some GF-symbols of the Gotlandic farmers and the narratives of ‘feed the world’ do have an inhibiting effect on the implementation of sustainable practices. The farmers face social and economic risks if they start to use sustainable practices and may experience negative feelings concerning their identities as GFs. Table 5 below shows examples of sustainable practices and how they create conflicts with GF-values.

*Table 5. Examples of sustainable practices and how they create conflict with GF-values.*

| <b>Examples of sustainable practices</b>  | <b>Conflicts with GF-values</b>   |
|---|---|
| <ul style="list-style-type: none"> <li>- Diverse landscapes</li> <li>- Reduced tillage</li> <li>- Acceptable levels of weeds</li> <li>- Establishing habitats for beneficial insects</li> <li>- Polycultures</li> </ul> | <ul style="list-style-type: none"> <li>- Farmer fails to show GF-symbols</li> <li>- Practices are perceived as ‘bad farming’ or neglecting the land</li> <li>- Risks of losing social and cultural capital</li> <li>- Negative feelings in relation to GF-identity</li> <li>- Hard to judge diverse landscapes</li> </ul> |

The narratives of ‘feed the world’ give the farmers a moral argument for continuing their conventional practices while generating a disbelief in alternative production systems and sustainable practices. Therefore, a shift towards more sustainable GF-values has to take place.

## Changing GF-values

It can be difficult to imagine that GF-values mentioned above will change, because their value has been accumulated through generations. Since all the Gotlandic farmers had inherited their farm, a lot of knowledge and norms had been passed on from previous generations. Furthermore, the risk of losing social capital by being perceived as a ‘bad farmer’ inhibits the creation of new norms. Nevertheless, some GF-values and their symbols are changing towards more sustainable ones. There are several examples of this.

When organic farming started in the 1980’ies, the farmers were mostly seen as ‘hippies’ and their practices were not considered ‘good business’ (farmer C, 4/3; Sutherland 2013; Burton et al. 2021). As organic production has become more mainstream, knowledge, practices and the farmers themselves have developed (Sutherland and Darnhofer 2012). Today, organic producers can have highly profitable productions, and they are generally more respected by conventional farmers. Several of the Gotlandic farmers even believed conventional and organic farmers could learn a lot from each other (farmer A, 2/3; farmer C, 4/3; farmer F, 8/3; farmer G, 15/3). The organic farmers bring along new symbols, which are more sustainable, e.g., establishing field edges as habitats or having a higher variety of crops (Sutherland 2013). Organic farmers have presented a set of new symbols to conventional farmers and both challenged and broadened their ideas of what a GF is (Sutherland and Darnhofer 2012; Sutherland 2013). However, organic production does not equal sustainable agriculture according to agroecologists. Organic production has moved towards industrialization and lacks a lot of the elements which are important in agroecological production (Gliessman 2015). Nevertheless, organic farmers have definitely challenged some of the GF-symbols and pushed towards more sustainable ones (e.g., more ‘messy’ fields or polycultures). This has led to conflicts and passionate debates, but also to reflection and sharing of knowledge (Sutherland and Darnhofer 2012; Saunders 2015). If symbols from both parties can be connected, a learning process can be started. Saunders (2015) gives the following example: A conventional farmer weekly visited an organic pig farmer. At first, the conventional farmer was highly critical of organic production, but over time he saw it in a more positive light. He noticed the pigs were putting on weight, and the farmer was better paid for her produce. It was a process of ‘slow persuasion’, which according to Saunders (2015, p. 402) illustrates how norms within agriculture can change:

The ‘happy pigs’ account illustrated that farmers are entrepreneurial – willing to change their minds – if convincing evidence is presented and it is linked to opportunities to enhance farm productivity. In this case, raising healthy pigs that yielded additional value per head constituted convincing evidence.

GF-values are also changing due to AESs. Although these schemes have been criticized for not being culturally sustainable (Burton et al. 2008; Burton and Paragahawewa 2011) or having a positive environmental effect (Jordbruksverket 2011a), some studies show that they do affect norms within conventional agriculture. Riley (2015) shows how a group of English conventional farmers have made constructive changes after 10 years of AESs. Practices which, e.g., increased bird habitats or reduced inputs were seen as non-valuable at first. But after 10 years, where the farmers

had gotten to know the conservation officers personally and learned to fit the practices into their production system, they saw a higher value in the AESs. During the years, the farmers were able to adopt and adjust the language and terms in the AESs to their own language. This allowed the farmers to integrate their own knowledge with the knowledge from the AESs. According to Riley (2015, p. 70), this type of assimilation is an important cultural competence:

Important to note, though, from this farmer's explanation is how this assimilation of new terminology and understandings is a familiar aspect of farming and a long established part of farming practices. Whilst the particular type of knowledge may be different, this ability to assimilate new nomenclature is far from unusual. Indeed, rather than being a move associated with capital loss, taking on board environmental messages and knowledge *alongside* and overlapping *with* pre-existing understandings is a central "cultural competence" (Bourdieu, 1986; p.81) and can be seen as important to enhancing social capital.

Adjusting to an ever changing world has always been part of being a farmer, and therefore farmers are used to adapting new ideas (although with varying willingness). The study of Riley (2015) emphasizes that if the farmers feel they have a certain 'ownership' of which activities they want to participate in within the AESs, there is a much higher chance of succeeding with the practices. If the farmers could combine pre-existing symbols of GF with new symbols from the AESs, they could continue to be a GF while using more sustainable practices (Riley 2015).

Westerink et al. (2021) studied Dutch farmers and their ability to include sustainability practices into their norms. The Dutch farmers described a GF quite similarly to the Gotlandic farmers. However, the Dutch farmers also added the following: Innovativeness, responsibility towards biodiversity and society, happiness and a good working balance. When they were asked to describe a 'good land', the answers depended on what the landscape should produce. Land which produced grain should be tidy, whereas land with a biodiversity objective could be more 'messy'. Biodiversity was seen as a production objective, just as food was. According to Westerink et al. (2021), it was the emergence of a subculture within the Dutch agriculture that enabled sustainable practices to become part of being a GF. If Dutch farmers are to participate in the Dutch AESs and receive payments for these, they have to be members of agri-environmental collectives. These collectives are organizations of farmers, which are responsible for implementing the Dutch AESs. A subculture had been created within the collectives, where farmers could learn from, debate with and support each other as well as viewing how some practices worked. This enabled knowledge sharing among like-minded and offered a forum with different kinds of social capital, which were crucial according to Westerink et al. (2021, p. 67):

An increase of biodiversity-friendly farming practice requires the build-up of new cultural capital within farming subcultures that offer alternative social capital and recognition for farmers who are willing to risk losing status in their local farming community because of the 'messy' landscape that they create.



The study clearly shows the importance of social contexts. Offering an alternative culture with different forms of social and cultural capital can establish new GF-values and accompanying symbols. Since biodiversity or polycultures were seen as positive within the subculture, the Dutch farmers aimed to show these symbols instead of strict tidiness. The farmers could thereby find social support in the implementation of sustainable practices. This is very important when changing norms within agriculture.

These studies are examples of how GF-values can change over time. Sometimes a change can happen slowly over several decades, other times it changes quickly due to extreme circumstances (Burton et al. 2021). However, there is no doubt that sustainable and alternative practices are influencing the GF-values. Riley (2015, p. 73) states that:

... It was clear from both participating and non-participating farmers that ‘ignoring the environment’ or farming in a manner negligent of the environmental consequences was no longer a viable position.

The Gotlandic farmers were also aware of environmental challenges and were positive about changes which could reduce their ‘pollution footprint’. However, the changes should not decrease their profitability or their social capital. The challenge is to unite GF-values and their symbols with sustainability.

## **Towards sustainability?**

We have seen that the Gotlandic farmers’ GF-values of cooperation, working hard, having timing and keeping track of the production are fully compatible with a sustainable agriculture as defined by agroecologists. It is mainly the visible symbols of GF that can make it difficult to achieve sustainability along with the narratives of ‘feed the world’. However, the studies described above give clear examples of how to shift GF-symbols towards more sustainable ones. Based on these studies and personal thoughts, three suggestions on how to change GF-symbols are given below.

### **Consistency and personal relationships**

Although GF-symbols can be changed, it can be a difficult process. Burton et al. (2021, p. 74) states that gradual steps and consistency are essential when changing symbols of GF:

The ease of change is important – incremental shifts are more easily implemented. For example, keeping up with technology leads to new symbols with limited resistance – the objectified cultural capital of a new piece of farm machinery devalues over time, as newer models are introduced. The consistency of these rules is very important – inconsistent signals in any of the fields in which farmers engage make it difficult to form new symbols: the direct connection between symbols and outcomes is not evident.

More than a few of the Gotlandic farmers expressed frustration towards the inconsistency of rules, which they had to follow in order to receive subsidies. Farmer A (2/3) had established field edges,

due to the ecological and financial benefits they have. However, the requirements for receiving subsidies for them often changed, and he found this very annoying. Farmer G (15/3) had a similar experience and felt the supervisors from the authorities ‘looked down upon him’, when they told him his flower strips were 20 centimeters too small in some places. Others mentioned that they waited a few years before they implemented changes in their production, because the rules changed so often. No wonder the farmers were critical of new rules, certifications, greening subsidies, etc., if they have such a high level of inconsistency. How much ecological effect can AESs really have, if the rules concerning them are changing all the time? Furthermore, it was not only farmer G (15/3) who felt that supervisors from different authorities disrespected him and his knowledge. Farmer E (14/3) believed the authorities mainly saw his production as environmentally harmful:

Yes, I see myself mainly as a food producer. While the region and all these authorities, they see me as an environmentally hazardous production. I am strongly against that. So I usually have a discussion with the environment and health authorities, when they come here to do their controls. [I tell them] ‘I think you are stupid’. I don’t say it to their face, but I have to point that out.

The other farmers were not as explicit, when they talked about authorities, but there was a clear sense of mistrust towards them. Not necessarily towards the rules per se, but to the overly accuracy they demanded and the unequal power relation between the farmer and the authority supervisors. The study of Riley (2015) showed similar opinions of the farmers when the AESs first started. However, since the conservation officers visited the same farmers over the years, both parties could establish relationships with each other based on trust and knowledge sharing (Riley 2015). It became a process of ‘give and take’, instead of ‘demand and control’ from the conservation officers towards the farmers. This can be an important part of slowly changing the GF-symbols toward more sustainable ones. Each farmer could develop and design a plan for implementing more sustainable practices in collaboration with AES officers, so different practices can be gradually implemented. There should be room for testing and experimenting in order to see what actually works on each farm, and the farmer should be able to participate actively in the decision processes. In this way, a more equal relationship could be established, and there would be better chances of succeeding with the AES – culturally as well as ecologically. It might also open doors for more knowledge sharing between academics and farmers, which currently appears difficult, since both sides are in defensive positions towards each other. Farmer E (14/3) was very critical of the ‘the balcony biologists on Södermalm who only consumed vegan food’. This clearly shows his negative impression of biologists, which is probably caused by the critique biologists have had, and still have, towards farmers. However, both parties can learn a lot from each other, once the right conversations are facilitated. Actually experiencing the benefits of the AESs is an important aspect for the farmers. Just hearing about the benefits from the authorities or academics does not affect farmers in the same way, as if they personally see their production benefit from the practices. This can take a long time though; implementing sustainable practices is time consuming, and the benefits are usually not noticeable in the first couple of years. Consequently, if GF-symbols are to shift towards more sustainable ones, elements such as time, consistency and active participation are important.

## **Subcultures or alternative social contexts for farmers**

As explained earlier, cultural capital and its symbols differ depending on the social context. Conventional farmers have a clear idea of what GF-capital is, and how they can accumulate it by showing certain symbols (Burton et al. 2021). However, a change in social context means a shift in cultural capital and the symbols of it. Westerink et al. (2020) clearly showed farmer subcultures with different cultural capital provided social support for farmers, when they started to implement sustainable practices. Since GF-values and symbols of them are generated in social contexts, they also change in social contexts. Bell (2004) studied the farmer organization ‘Practical Farmers of Iowa’ (PFI), and how they helped conventional farmers implement sustainable practices. The organization was established in the 1980’ies by conventional farmers themselves, as they faced severe challenges in their production systems. They started to experiment with new sustainable practices, which could reduce their inputs, improve the quality of the soil and generate more profit for the farmers. As the organization grew, it became a place where farmers could find support and help to make their production more sustainable. New cultural capital and symbols were generated; whereas the farmers previously used to be ‘strong, independent men’ with huge machine parks and highly industrialized productions, PFI encouraged collaborations, a diversity of voices, talking about one’s feelings and keeping an open mind towards alternative practices. There was generally an encouragement of dialog instead of monologue, and this was new for the farmers. According to Bell (2004), Big Ag in the USA provides a structure of monologue for the farmers. Bell (2004, p. 235-236) states that:

The speeding of the treadmill associated with the Big Ag way is itself a structure of monologue, encouraging farmers to seek the quick answers, the readily available answers, the silver bullets, even if one has a slightly uneasy feeling about the shooters of those bullets... But the problem gets worse and worse the faster the treadmill spins. And given the local intensification of this treadmill through the farmer’s problem, farmers are increasingly less likely to look to their neighbors for answers, lest either party gain an advantage over the other thereby. Instead they turn to monologic answers that the treadmill itself provides (only sending it spinning faster).

PFI provided a more dialogical approach, where the farmers learned from each other and from academics as well. Attitudes and practices, which were perceived as negative and rejected among the highly industrial farmers, became appreciated among members of PFI. This type of social support helped farmers to continue their sustainable practices, although they were met with critical eyes in their own farming community. Several farmers in the study actually expressed that PFI changed their lives. Although Bell (2004) does not use the GF-terminology, his study clearly shows the importance of social and cultural capital. New GF-values were generated in new social contexts, and they spread as the organization grew. It also shows the importance of rejecting the ‘easy answers’ from Big Ag in which the industry wishes to keep conventional farmers dependent on them and shape their products accordingly.

These kinds of farmer organizations can be essential when shifting GF-symbols towards more sustainable ones. Not only can farmers find social support; they may also experience a high level of

knowledge exchange, if the organizations can facilitate a good learning environment. If discussions, lectures, dialogs and field experiments are carried out in a respectful manner and on equal terms, the chance of applying the knowledge is much higher. It is likely that the Gotlandic farmers would have appreciated this kind of ‘bottom-up’ knowledge instead of the ‘top-down’ they had experienced from authorities. In the study of Westerink et al. (2021, p. 65), the farmers especially valued social learning and experiments:

For the build-up and transfer of such cultural capital, teaching and training are important, but experimenting and social learning even more. Our respondents say that they learn most from colleagues and farmer groups and that the agri-environmental collective is particularly important for their knowledge of ecology.

There is another positive feature of farmer organizations. If the most respected farmers (meaning those with high levels of social and cultural capital) start to change their practices, other farmers will usually follow. Farmer A (2/3) stated that one of the best farmers he knew was ‘always ahead of the environmental regulations’, and he had learned a lot about e.g., field edges from him. Highly respected farmers can be powerful actors when it comes to shifting GF-symbols. They may hold current GF-symbols in place, however they may also inspire and enable the change of them as well. Therefore, influencing and engaging highly respected farmers in sustainable practices should not be underestimated when shifting GF-symbols towards sustainable ones. A third feature of farmer organizations is they can be part of the ‘display’, where farmers show their GF-skills. As mentioned earlier, GF-symbols require a ‘display’ where farmers can show their GF-skills (Burton et al. 2021). Farmer organizations enable farmers to display their results, their knowledge and their skills on e.g., field days at farms or in discussion groups. If the farmer organization focuses on sustainable practices, these are the symbols the farmers wish to display in order to accumulate social and cultural capital among each other.

### **Establish ‘experiment farms’**

There is a need for more knowledge about alternative production systems and how to transform conventional farms towards more sustainable ones. Also, the current knowledge about these things has to be much more widely spread than they are today. One way to do this could be to establish ‘experiment farms’ in different Swedish regions, where different sustainable practices are implemented, improved or developed. A diverse group of people could be planning and participating in the studies, such as farmers, agronomists and biologists. Local farmers could be invited to field days and discussion groups and e.g., hear about the implementation of certain practices, what their benefits could be and learn how to use them on their own farm. Local studies and results may be easier for the farmers to relate to and use than studies done in other parts of the world. Furthermore, if highly respected farmers are engaged in the farms and start to use the sustainable practices, it could start shifting GF-symbols. The ‘experiment farms’ could display the flaws in the ‘feed the world’ narratives and teach about the diversity of sustainable production systems that exist today. Another aspect the farms could focus on could be local breeds from the region (e.g., a certain type of grain from a specific place). Cultivating and developing local breeds

which are adapted to the local conditions are not only more sustainable. They can also strengthen farmers' pride and independence. Generally, such 'experiment farms' could be a starting point or a driving force in changing GF-symbols.

### **The aspect of necessity**

The suggestions described above could be ways to change GF-symbols within social contexts. However, it is important to remember that GF-values and their symbols are bound by necessity. They are largely shaped by the economic reality of farmers. Therefore, not only social norms keep the current GF-values and symbols in place. It is also the entire industrial food system that is designed for monocultures, tidiness, utilization of land and uniform food (Gliessman 2015). This system rewards farmers who rationalize and maximize their production, while small-scale farmers are outcompeted. Furthermore, there are powerful actors within the current food system, which have an economic interest in the continuation of its highly unequal and unsustainable structures (IPES 2016). As Bell (2004) claims, especially Big Ag has an interest in making farmers heavily dependent on them. Although most of the Gotlandic farmers seemed to have economic margins for changing smaller things in their production, and changes on a bigger scale seemed out of reach. A number of them also mentioned that most farmers just tried to survive as farmers. In such an economic reality, it is difficult to find the time and resources to reflect, learn and let alone change one's production toward a more sustainable one. The risks are simply too high. Due to these reasons, an entirely different food system has to replace the current one.

## **An alternative food system**

Since the current food system is a highly complex matter, several theses could be written on how to change certain parts of it. Therefore, only a few suggestions will be presented here. They should be seen as elements to aim for, not specific policies. The suggestions are based on ideas of the Gotlandic farmers, studies of agroecologist researchers, the recommendations of IPES (2016) and personal thoughts.

### **Increase the value of food**

Import of food, globalization, commodification and long supply chains has decreased the value of food (IPES 2016). In Sweden, most people expect to find an abundance of cheap food in supermarkets. This has to change. Food is not merely a commodity, it is fundamental for human survival and prosperity. Therefore, the value of food should be increased on several levels. Producers of food should be better paid, and food should generally be valued economically higher than it is today. Furthermore, knowledge of the food system and how food is produced should be spread across society. People have to understand that food should be cherished instead of simply taken for granted. Since the CAP keeps prices on food low, it might be an idea to restructure the CAP. Several of the Gotlandic farmers experienced the subsidies as a way to support the consumers, not the farmers. If the subsidies were removed, and the costs of importing food from the global market were higher, the farmers would be better paid for their produce. This idea is

interesting: The CAP is several decades old and is necessary for the survival of many farmers in Europe (including the Gotlandic farmers), since they cannot compete on a global market. Yet, removing the subsidies and increasing the prices on imported food may lead to a higher value of nationally produced food and thereby better payments for the farmers. Since the economic margins for many farmers are so small, an increase of income could give the farmers room to educate themselves or to invest in sustainable practices. It is, of course, a radical idea, and it would require massive changes in global policies, if it were to be pursued. It does, however, have interesting aspects. Regardless, the expectation of cheap food has to be challenged. Food is valuable, and it is fair to ask consumers to use more than 12,3 percent of their income on food (which is what the average Swede does) (Roos 2020).

### **Shifting power balances**

None of the Gotlandic farmers felt they were well paid for their produce. They expressed frustration towards the fact that supermarket chains such as ICA or Coop could push the prices of the farmers' produce down, while earning the most money in the entire supply chain. Farmer G (15/3) even claimed that 'it was ICA, Coop and AXA Food who controlled this country'. There is a skewed power balance between mass retail and the farmers. Mass retail has the power to import cheap food from all over the world, which means that it can demand extremely low prices from Swedish farmers. Due to the lack of alternative selling channels, mass retail is often the only way for Swedish farmers to sell their produce. Therefore, mass retail buys produce cheap and sells it at its most profitable price. In this way, a large share of value is moving up in the supply chain at the expense of the farmers (IPES 2016). In Sweden, only 9 percent of the commodity's price goes directly to the farmer. 34 percent goes to supermarkets and wholesalers (LRF 2021c). This power balance has to become more equal. According to IPES (2016), concentration of power in the food system is one of the main forces that keeps industrial agriculture in place. They (2016, p. 57) state that:

Food systems, in their current forms, allow value to accrue to a limited number of actors, reinforcing their economic and political dominance, and thus their ability to influence the policies, incentives and imperatives guiding those systems.

Establishing alternative markets is one way to shift the power balance. In the last couple of years, alternative selling channels have emerged in Sweden e.g., Reko-ringen or selling directly to consumers online. Some of the Gotlandic farmers also sold some of their produce at their own farm shop or to neighbours. These alternative selling channels have to be supported and encouraged along with small-scale cooperatives. This would minimize the power of mass retail and enable the farmers to be paid more fairly.

### **Reconnecting farmers and consumers**

In addition to the previous suggestion, bringing farmers and consumers closer will increase the sustainability of the food system. According to Gliessman (2015), way too much power has been given to those who stand between farmers and consumers (e.g., mass retail and Big Ag). These

actors have generated a lot of the issues in the food system, and their power has to be minimized. Bringing farmers and consumers closer is one way to do this, and this process gives a lot of benefits. Gliessman (2015, p. 322-323) states that:

The growing of food is as much a set of social and ecological relationships as it is farming, and reestablishing the vital connection between the people on the farm and the people at the table is a critical step toward reaching back to the land, outward to the people, and forward to sustainability.

If the farmers and consumers are connected in a more local food system, long transports and extensive packing of food is eliminated. Also, a higher level of local nutrient cycling is possible, since waste and residues (e.g., food waste) can be given back to the farms. A closer connection between the farmers and consumers could also be seen in the local landscape, since a higher diversity of crops would be cultivated. Local food systems are highly beneficial for local economies and can provide jobs, sustain small communities and revitalize the countryside. Money can recirculate in a local food system, and farmers can be fairly paid for their produce. Another benefit of a closer relationship between farmer and consumer could be the increased knowledge exchange and/or a sharing of costs and benefits (e.g., in a CSA) (Gliessman 2015). Local food systems are also fully compatible with most of the Gotlandic farmers' GF-values. Actually, the farmers might take more pride in being a food producer, because they would feed the community more directly. Policies and initiatives which encourage and enable local food systems should be prioritized over those who support increased food export and mass retail (Gliessman 2015; IPES 2016).

### **Alternatives ways of fertilization**

Conventional farmers are heavily dependent on artificial fertilizers, and this dependency has to be minimized. Not only because of the environmental pollution that comes along with it, but also because it makes farmers highly vulnerable to increasing prices and supply shortages (Gliessman 2015). The Gotlandic farmers were very worried about the high prices on inputs due to covid-19 and the Ukrainian war. Therefore, alternatives to artificial fertilizers have to be studied, developed and presented to farmers. It is not an option to rely on livestock manure, since livestock has to be reduced in order to achieve sustainability. Also, livestock manure can never fertilize more land than what is needed to feed the livestock themselves. Within vegan farming, a wide range of methods are used to fertilize the soil such as wood chips, nettle water or mulching (Hall and Tollhurst 2015). However, this has mainly been done on small-scale farms. Returning plant or food residues is also a way to maintain soil fertility, and there is an increasing focus on this in Sweden. E.g., in Skåne, Sysav has developed a type of 'slurry' for farmers based on food residues from Skåne (Sysav 2022). Biochar, composts and legumes are other examples of techniques to maintain soil fertility. All these different methods have great potential, but have to be developed and up-scaled, before they can start to replace artificial fertilizers. More local ways of fertilizing soil can have a wide range of ecological benefits, and it increases the farmers' resilience (Gliessman 2015).

## **Encourage diversity**

Diversity is a key element in agroecology, and it should be encouraged in agriculture on several levels. Ecological diversity in the form of different crops, breeds and agricultural methods can have a number of beneficial features and makes the production system more resilient (Gliessman 2015). Accepting the ecological conditions of a farm and adapting to them is much more sustainable although often more complicated. The same problem may appear with a diversity of people within agriculture; it may lead to debates and conflicts when people with different values, education and heritage meet in agricultural settings. There is, however, a great potential of rich knowledge exchange, if the right conversations are facilitated. According to Bell (2004), the learning processes in the PFI organization are a matter of adaption-diffusion. He (2004, p. 235) states that:

PFI does not offer its members the seductive comfort of final answers... PFI gives its members people to talk to and a means for comparing practical circumstances, ever adapting others' words to their own thoughts and offering their own words back for others to chew over, to reshape in the light of their experiences, and to give back to others once again. It is not a process of adoption-diffusion. It is a process of *adaption-diffusion*.

Big Ag can offer 'step by step guides' that the farmer should simply 'adopt', but it comes with socially and ecologically negative effects. PFI encourages farmers to find out what works best for them and adapt what they have learned to their production systems. Such a process generates much more diverse practices and empowers the farmers. It may not immediately generate sustainable production systems, but it can bring farmers on the right path. Bell's study (2004) is a clear proof of that. Diversity is also needed when framing questions and developing solutions in agriculture. Food cultures and ecological landscapes are highly diverse, although the current food system pushes for uniformity and monocultures. Therefore, the world does not need *one* diet or *one* type of agriculture; it needs numerous. Diversity may be complicated, whether it applies to planning a polycultural crop rotation or developing agricultural policies for the EU. It should, however, be seen as a strength due to the wide range of benefits it creates and its necessity for sustainability.

## **A new economic system**

This point may seem radical, but a wide range of problems in agriculture are connected to the capitalistic system and its demand for ever increasing growth. A large number of farmers have production systems which are socially and ecologically sustainable, but can barely survive economically, because of the way the capitalistic system is designed. Economic growth cannot be the only aim of an economic system; it has to have several purposes and help provide people with what they need. The current system distributes resources in a highly unequal way and generates massive ecological and social crises. Therefore, a new economic system with a multitude of functions and aims must be implemented.



## Conclusion

This thesis has focused on what constitutes a GF for Gotlandic conventional farmers, and how this affects the path to a sustainable agriculture. The applied methodology of interviews and literature studies have enabled the research question to be answered. It can be concluded that a GF for the Gotlandic conventional farmers is a farmer who is business orientated, has a certain amount of specialized knowledge and works according to the ‘farmer’s code’. This code implies the farmer takes good care of his/her soil and livestock and is able to pass the farm on to the next generation. A GF also works hard and is able to cooperate with other farmers. He/she keeps track of his/her production and has good timing in everything he/she does. A GF is a food producer, who helps to ‘feed the world’. Symbols of being a GF are tidy fields and farm buildings, healthy crops and livestock, modern farms and utilization of land. The GF-values of specialized knowledge, hard work, cooperation, timing and keeping track of one’s production are fully compatible with sustainable agriculture as defined in this thesis. However, the visible symbols of being a GF inhibit the implementation of sustainable practices and thereby future sustainability in agriculture. Sustainable practices can generate symbols which are considered as ‘bad farming’ due to their opposition to tidiness, monocultures and uniformity. If farmers are viewed as ‘bad farmers’ or ‘neglecting their land’, they will lose cultural and social capital and experience negative feelings concerning their identity as a GF. Implementation of sustainable practices thereby poses a social risk for the farmers. Furthermore, the current food system forces the farmers toward increased rationalization and efficiency as the treadmill of production spins faster. This leaves the farmers with small economic margins and inhibits investments or participation in sustainable practices. Consequently, both social norms and the current food system keep conventional agriculture on its unsustainable path.

Since GF-values are established in social contexts, they also change in social contexts. In order to generate more sustainable GF-values and symbols, farmers have to be offered an alternative social context in which they can find social support, experience knowledge sharing and be encouraged to continue their sustainable practices. This social context can be facilitated through farmer organizations, carefully designed AESs or ‘experiment farms’. However, other factors in the food system also maintain and reward the current GF-values and symbols. Radical changes in the food system are therefore necessary in order to shift GF-values toward more sustainable ones. The path to sustainable agriculture will not be a simple and forward process, but farmers and their values have essential roles to play. These values can be seen as key elements in achieving sustainable agriculture, if the farmers are engaged and active participants in the process.

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# Appendix



## 'Good Farmer' Values and How They Affect the Path to a Sustainable Agriculture

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### Resisting change

The world is facing a number of ecological crises: Massive loss of biodiversity, climate change, disrupted nitrogen and phosphorus cycles, destruction of natural habitats, chemical pollution, etc. (Rockström et al. 2009). Conventional agriculture is contributing to all these crises, and fundamental changes must therefore take place within conventional agriculture. For decades political initiatives such as agri-environmental schemes (AES) have tried to shift conventional agriculture towards more sustainable and multifunctional agriculture. However, these initiatives have been met with resistance from conventional farmers, and cultural or ecological outcomes of policies or AES have been small or even absent (Burton 2004; Burton and Paragahawewa 2011; Jordbruksverket 2011a; Saunders 2015). According to sociological researchers, this resistance is caused by the social norms of what it means to be a 'good farmer' (GF) for conventional farmers (Burton et al. 2021). The study, summarized in this fact sheet, identifies the GF-values of conventional Gotlandic farmers, and how these values affect the path to a sustainable agriculture.

### A study of conventional Gotlandic farmers

Semi-structured interviews were carried out with 9 conventional farmers, who were all located on Gotland. The farmers either had a production of dairy, meat (pork or beef), grain or vegetables. All farmers were asked to describe a 'good farmer' along with the values and norms which were essential in their farming community.

### Results

The following tables show the GF-values of conventional Gotlandic farmers and the visible symbols of these values.

| GF-values   |
|---|
| Buisness orientated   |
| Specialized knowledge   |
| Works according to the 'farmer's code'                                    |
| Works hard  |
| Independent, but can also cooperate                                       |
| Keeps track of production   |
| Has good timing   |
| Food producer, who helps to 'feed the world' ('feed the world' narrative) |



| Visible symbols of GF-values                                 |
|--|
| Healthy crops and livestock                                  |
| Tidy fields (no weeds, straight plowing lines, monocultural) |
| Tidy farm buildings  |
| Modernization of farms                                       |
| Utilization of land use                                      |

These values and symbols are mainly generated by the productivist mindset which most conventional farmers have (Burton et al. 2021; Saunders 2015), which is necessary if they want to have a profitable farm within the current food system (IPES 2016). All the farmers strived to be GFs and show visible symbols of the GF-values. If they failed to show the symbols, they risked to be seen as 'bad farmers' and thereby lose social and cultural capital within their farming community.

### GF-values and their effect on sustainability

The GF-values of the Gotlandic conventional farmers are generally compatible with a sustainable agriculture as defined by agroecologists. However, the visible symbols of the GF-values were found to have a negative effect on the path to a sustainable agriculture. For example, tidy fields require practices such as pesticides and intensive tillage. Agricultural practices which are more ecologically sound produce symbols (e.g. 'messy' perennial fields or high crop diversity) that contradict with the GF-values. If the farmers chose to adapt ecologically sound practices, they faced risks on several levels:

- 1) Social risks: The farmers could be seen as 'bad farmers' who neglect their land. They risk losing social and cultural status in their farming community.
- 2) Identity risks: The farmers risk experiencing negative feelings

concerning their identity as GFs, since the community would not perceive them as GFs anymore.

- 3) Economic risks: Introducing sustainable agricultural strategies involve economic risks, and most conventional farmers are already struggling to survive financially.

Due to these risks, conventional farmers often resist changing their agricultural practices towards more sustainable ones.

### Shifting GF-values towards sustainability

GF-values are constantly changing and affected by a wide range of factors in the food system (Burton et al. 2021). If GF-values of conventional farmers are to change to more sustainable ones, it is important to offer the farmers alternative social contexts, in which they can find social support (Burton et al. 2021; Riley 2015; Westerink et al. 2021). Farmer collectives (which host lectures, workshops, experiments, etc.) or trustworthy relationships with AES-controllers are just two examples of such social contexts. However, GF-values are heavily influenced by the current food system, in which radical changes have to take place, if more sustainable GF-values are to be generated.

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