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Can a 'good farmer' be nature-inclusive? Shifting cultural norms in farming in The Netherlands

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Keywords: Behaviour Biodiversity Cultural capital Subculture Social capital Agri-environmental collective	In this article we investigate whether the Dutch policy concept of 'nature-inclusive farming', involving biodiversity-enhancing forms of agriculture, can become part of 'good farming' norms in Dutch farming culture. We interviewed 24 Dutch farmers individually as well as in focus groups in four case study regions in the Netherlands. Based on a qualitative analysis, we found confirmation of findings of studies elsewhere in terms of the presence of production-oriented conceptions of 'the good farmer' and 'a good landscape', which, in general, discourage biodiversity-friendly behaviour. Yet, we also found indications that pursuing biodiversity objectives is becoming part of what it means to be 'a good farmer' and to cultivate 'a good landscape'. We found these changing norms amongst farmers who participate in collective agri-environmental management. We propose that the Dutch agri-environmental collectives foster the development of nature-inclusive cultural capital: the skill to create landscapes that host biodiversity as well as to recognize and appreciate that skill on the land of others. Our insights into farmers' cultural norms and the way that they change are helpful in the development of governance strategies that promote nature-inclusive farming.

1. Introduction

In some rural regions in the Netherlands, farmers voluntarily mow public roadsides because in their opinion they look 'messy'. In literature we find a general preference among farmers for 'tidy landscapes' without weeds and clutter (Burton, 2004, 2012; de Krom, 2017; Schmitzberger et al., 2005; Thomas et al., 2019). This is more than just an aesthetical preference. Tidy landscapes are among the visible symbols by which farmers recognize 'good farmers' and through which they can display their skills to their colleagues (Burton, 2004, 2012). However, such landscapes are not very likely to foster high levels of biodiversity.

Biodiversity in many rural areas has been in decline for decades and farming practice has a major influence on biodiversity on farmland as well as in natural areas (Díaz et al., 2019). For large numbers of farmers to profoundly change their practices for biodiversity recovery, a range of conditions would need to be in place, including a good income for farmers with biodiversity-friendly practices and supporting regulations (Runhaar et al., 2017; Westerink et al., 2020a). In addition, farmers

would need to be able to consider biodiversity-friendly practices as consistent with their identity and pride as farmers (Burton, 2004). This cultural condition is the focus of this article.

The effectiveness of governance strategies aiming to influence farming practices, such as agri-environment schemes, regulation and nudging, will benefit from a better understanding of the role of culture in farming (Dessart et al., 2019). 'Cultural resistance' in relation to a preference for tidy landscapes according to Burton et al. (2008) partly explained the low participation of English farmers in the agri-environment scheme. In this article we consider how cultural norms in farming communities regarding 'a good farmer' and 'a good agricultural landscape' influence farmers' attitudes towards biodiversity-friendly practices. In addition, we consider cultural change, as possibly conditional to recovery of biodiversity in agricultural landscapes.

In The Netherlands, a range of stakeholders including the national government, provinces, nature organisations and agri-environmental collectives try to promote so-called 'nature-inclusive farming'. 'Natureinclusive farming' is envisioned as a range of farming practices that

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avoid a negative impact on biodiversity, benefit from biodiversity and enhance biodiversity (Runhaar, 2017; Van Doorn et al., 2016). Nature-inclusive farming is a policy concept that so far has only been used in The Netherlands. It combines existing concepts such as agri-environmental management, functional agrobiodiversity, ecosystem services, circular agriculture and agro-ecological farming (Van Doorn et al., 2016). It aligns with regenerative and nature-based agriculture (Oberč and Schnell, 2020). Nature-inclusive farms are defined as having low emissions and thereby a limited negative impact on biodiversity on the farm or in the surroundings, making use of biodiversity through ecosystem services and taking care of biodiversity through landscape management (Van Doorn et al., 2016). In a letter to Parliament (Kamerbrief DGAN-NB/17093609, July 10, 2017) the Dutch Minister of Agriculture, Nature and Food Quality distinguished three levels of nature-inclusive farming, all above the baseline of European and national regulations. The first level is agri-environmental management. The second level combines agri-environmental management (such as protection of farmland birds) with use of ecosystem services (such as pollination, natural pest reduction and soil life) and/or principles of circularity (such as reducing inputs and optimising flows of feed and manure on the farm itself). The third and most advanced level of nature-inclusive farming is a fully integrated agro-ecological farming system.

Nature-inclusive farming is part of the Vision for the future of agriculture in The Netherlands published by the Minister of Agriculture, Nature and Food Quality: "Agriculture, nature and food: valuable and connected" (LNV and Ministerie van Landbouw, 2018). So far it is mainly envisioned as a pathway for transition; it is not sharply defined but rather used as a boundary concept to stimulate public debate and to inspire stakeholders, including government, to take action (Runhaar, 2016, 2017). Since the introduction of the concept in the Nature Vision of 2014 (EZ and Zaken, 2014), it has been taken up in numerous projects, partnerships, policy documents and subsidy schemes. It is used by businesses (e.g. Rabobank, FrieslandCampina), farmer groups (e.g. LTO, BoerenNatuur), NGO's (e.g. BirdLife Netherlands, Natuurmonumenten, Kening, Wij.land) and the various tiers of government (especially the Provinces and Waterboards), and discussed in politics, the (social) media and in meetings. Nature-inclusive farming has become part of the discourse as one of the directions that the development of agriculture could take. This does not mean that there is consensus about the future of farming, or that all farmers consider nature-inclusive farming as a feasible and desirable option for themselves.

In this article we address the following research question: what is the role of farmers' cultural norms regarding 'a good farmer' and 'a good agricultural landscape' in the acceptability of 'nature-inclusive farming' amongst farmers in The Netherlands?

In the next section we present our theoretical framework, in which we elaborate on the concepts of the 'good farmer' and a 'good agricultural landscape' in relation to famers' cultural norms and self-identity. We follow Burton et al. (2008), Burton and Paragahawewa (2011) and Burton (2012) by placing these concepts in the context of cultural capital as theorized by Bourdieu (1986). In addition, we consider diversity and evolution of cultural norms. After that, we describe our qualitative methods, followed by the results of four case studies in The Netherlands. In the discussion we identify the limitations of our study as well as the additions to literature. In the conclusion we answer the research question and reflect on the relevance of our findings for policy.

2. Theoretical framework

Burton (2004) reported that arable farmers in an English rural area admitted that they applied more pesticides to fields that were well visible from the road than would be economically rational. They did this because they knew that their colleagues would be driving around monitoring the fields of other farmers, as they did themselves, and they wanted to make sure that their fields looked properly managed. A good farmer could be recognized by his or her land and well-managed land would be free of weeds. This display of skill by paying extra attention to visible symbols in the landscape such as 'clean' fields and healthy livestock is known as 'roadside farming' (e.g. Burton, 2004). By means of driving around, farmers benchmark their own skills and status as a good farmer to the skills of others. By means of roadside farming, farmers take the norms in their farming culture regarding what 'a good farmer' does and what land should look like into account in their farm management decisions.

In this article, we use the concept of 'good (agricultural) landscape' (Nassauer and Westmacott, 1987) to capture normative descriptions of landscape related to 'good farming'. We find it helpful as a category term for concepts such as 'tidy landscape' as well as positive descriptions by farmers of landscapes that display biodiversity-friendly farming practices. We address conceptions of 'good farmer' and 'good landscape' as cultural norms because we consider them as - often unspoken - social standards for appropriate and inappropriate behaviour based on shared beliefs within a specific cultural group (in this case, farmers), which may be passed on from generation to generation (Atwell et al., 2009; Johnsen, 2004; Riley, 2016). Cultural norms within farming communities concerning 'a good farmer' and 'a good agricultural landscape' influence farm management decisions in two ways (Burton, 2004). First, cultural norms influence farm management decisions through self-identity. A farmer strives to be a 'good farmer' according to cultural conceptions of 'the good farmer' that she or he has internalised. Self-identity refers to the extent to which a certain behaviour is seen as part of - or consistent with - the self (Lokhorst et al., 2011). Second, cultural norms influence farm management decisions through anticipation on the opinion of peers. In turn, feedback from the social environment influences self-identity (McGuire et al., 2013).

According to empirical studies, cultural norms regarding a 'good farmer' may include the following: a good farmer works hard, achieves a good yield, masters working with machines, does not pollute the water, takes good care of his/her livestock, and is a good neighbour (Burton, 2004; Burton et al., 2008; McGuire et al., 2013; Saunders, 2016; Sutherland and Burton, 2011). Many farmers find the unpredictability and uncontrollability of nature, such as in the case of rivers, hard to combine with their identity as a good farmer (Thomas et al., 2019). In general, a 'good landscape' is neat and tidy, without weeds, but with a healthy and even crop, straight working lines, healthy livestock, no soil erosion, and well-kept landscape features (Burton, 2004; Burton et al., 2008; Burton and Paragahawewa, 2011; de Krom, 2017; Lavoie and Wardropper, 2021; Schmitzberger et al., 2005). The cultural norm that a 'good landscape' is a tidy and productive landscape as a display of farmers' skill, implies that the presence of 'untidy' biodiversity enhancing features can lead to a loss of status in the farming community. This cultural norm can, accordingly, be a barrier for farmers to engage in practices such as organic farming or agri-environmental management (Burton et al., 2008; Sutherland, 2013).

Burton and Paragahawewa (2011) and Burton (2012) place farmers' cultural norms regarding the 'good farmer' and the 'tidy landscape' in the context of Bourdieu (1986) theory of capital. Bourdieu distinguishes between three states of capital: economic, social and cultural capital, which can be transformed into each other through a fourth state of capital: symbolic capital. Here, we focus on cultural capital, its relation to social capital and the role of symbolic capital in transforming cultural capital into social capital and vice versa.

Social capital is derived from membership of a group and involves the capacity of agents to gain access to group resources. Symbolic capital is the status or value that people attach to the other (social, cultural and economic) forms of capital, and enables exchanging one form of capital into another. Cultural capital comes in three forms, of which two are most relevant to our study: embodied and objectified cultural capital. Embodied cultural capital involves skills and knowledge that are part of one's mental and bodily dispositions, such as the skills of a 'good farmer'. It can be acquired through upbringing, education and

experience and cannot be detached from the person who possesses it. It can only be transferred (i.e., taught) to others through great investment of time. Objectified cultural capital involves goods with a high status within particular groups, such as 'tidy' agricultural landscapes that have been found to have a high status within farming communities. Embodied cultural capital is required to be able to create - as well as to be able to 'read' or appreciate - goods with a high status value, such as a 'good' agricultural landscape. This is why farmers see different things in a landscape than non-farmers: farmers have embodied group-specific norms that enable them to create and 'read' agricultural landscapes, which reveal how 'good' farmers are performing according to group standards. Since farmers are members of a group, which gives them access to particular group resources (social capital), the status (symbolic capital) attributed to cultural capital in the form of being a 'good farmer' and managing a 'good agricultural landscape' is meaningful to them. A loss of status has consequences for their position in the farming community (with possible economic consequences), something most farmers would wish to avoid.

The above descriptions of cultural norms regarding 'the good farmer' and 'a good landscape' could suggest that such norms are both uniform and static. However, there is evidence that cultural norms in farming and related practices are heterogeneous (Brodt et al., 2006; Van der Ploeg et al., 2009; Vanclay et al., 2007). Rather than trying to capture 'the' farming culture we should be aware of multiple 'agri-cultures' or farming subcultures with (slightly) different sets of cultural norms (Burton, 2012; Vanclay et al., 1998). In addition, cultural norms in farming are subject to change (Cusworth, 2020; Johnsen, 2004; Riley, 2016). Building on Bourdieu, we would expect that such cultural change would imply development of new embodied cultural capital simultaneously with new objectified cultural capital. In other words: alternative practices that are visible in the landscape could create new meanings of what it is to be 'a good farmer'. Whether this new cultural capital yields symbolic capital in the sense of recognition in a farming community, depends on the availability of social capital within a related subculture. In other words: the development of alternative cultural norms may require a social context of groups in which the alternative practices and related skill are appreciated.

Nature-inclusive farming proposes an alternative conception of 'good farming' resulting in an agricultural landscape with other signs of farmers' skill. For many farmers, adoption of nature-inclusive farming would require the acquisition of new cultural capital: the skills to farm well in a nature-inclusive way, but also to recognize these skills on the land of others. In our case studies we investigated to what extent nature-inclusive farming is compatible with prevalent cultural norms regarding a 'good farmer' and a 'good agricultural landscape'. In effect, we studied a subculture of farmers who participate in agri-environmental management and for whom membership of an agri-environmental collective and experience with new practices could be ways to acquire new cultural capital.

3. Methods

To answer the research question we used qualitative and interpretative methods. Qualitative research is a form of social inquiry that focuses on the way people interpret and make sense of their experiences and the world in which they live (Atkinson et al., 2001; Flick, 2018). The basis of qualitative research lies in the interpretive approach to social reality and in the description of the lived experience of human beings (Bryman, 2001; Yanow, 2000). Qualitative researchers claim that the experiences of people are essentially context-bound (Miles and Huberman, 2013; Schwartz-Shea and Yanow, 2013), that is, they cannot be free from time and location, social and cultural context or the mind of the human actor. If qualitative research is context-bound, then researchers must be context sensitive. They use strategies of observing, questioning and listening to put themselves as researchers in the world of the participants. They generate descriptions of a culture (Hammersley and Atkinson, 1995). To study cultural norms in farming in their context of farming communities that work in specific landscapes and work with specific farming systems, we chose to do case studies (Yin, 2009).

We suspected that cultural norms are partly determined regionally, because of varying landscapes and related farming systems as well as general cultural differences between regions (Burton, 2004). To accommodate such diversity, we selected case studies in different regions with a variety in types of farms (arable farming, livestock farming and mixed farming), sizes of farms (in terms of land area), landscape and soil types. We selected four case study areas in The Netherlands (Fig. 1): Midden-Limburg, a small-scale riverine landscape with a diversity of farming systems; Noord-Beveland, an island with an open landscape dominated by arable farming on sea clay; Achterhoek, a small-scale landscape with mainly smaller livestock farm holdings on sandy soils; and Noordelijke Friese Wouden, an open peat meadow landscape with dairy farming. In these areas, we recruited in total 24 respondents (6 per through mediation by agri-environmental collectives. area) Agri-environmental collectives are organisations of farmers that are responsible for the implementation of the Dutch agri-environment scheme. In the Netherlands, farmers can only participate in the agri-environment scheme as a member of the agri-environmental collective in their region. Since 2016 agri-environmental contracts are no longer between farmers and the government, but between farmers and the collective (Westerink et al., 2020b). To enhance the chance of ecological success, the collective coordinates the management implemented by the various participants (Westerink et al., 2017). Therefore, participation in agri-environmental management implies regular contact with and advice from the field coordinator, involvement in monitoring, and contact with colleagues who also participate.

We asked the chair or de coordinator of the agri-environmental collective to look for farmers who are not 'advanced nature-inclusive' according to Dutch policy (fully integrated agro-ecological farming system, see the Introduction), nor have a downright negative attitude towards biodiversity. We suspected advanced nature-inclusive farmers – putting their heads above the parapet - to make their farm management



Fig. 1. Case study areas.

decisions fairly independent from prevailing cultural norms in the agricultural community (compare the category of 'engaged' farmers as identified by Van Herzele et al. (2013): deeply motivated for biodiversity, willing to profoundly integrate biodiversity into their farming practice, and fostering their relations with the public). In addition, we expected to find little evidence of shifting cultural norms with regard to biodiversity with farmers with a negative attitude towards biodiversity. As a result of this instruction to the agri-environmental collectives, we recruited farmers who participate in subsidized agri-environmental management. Furthermore, all research participants are members of a collective because only members of collectives can participate in the Dutch agri-environment scheme. The farmers (23 male, 1 female) were asked to rank themselves according to the levels of nature-inclusive farming as defined in policy (Table 1). Our interviews included questions about their identity as a farmer, what they considered as a good farmer and a good landscape, how status can be achieved in the local farming community, learning, and their willingness to 'do even more with nature' (see Appendix A).

In each case study area, we first interviewed farmers individually before we brought them together in a focus group. The interviews and focus groups took place as farm visits and physical meetings between September and December 2018. We used a semi-structured approach to retrieve comparable data, but to allow for natural conversations and emphasis on aspects that were important to the farmers. The same issues were discussed in the interviews and the focus groups, but the focus groups allowed us to observe the interaction between farmers and to identify joint constructions. We offered stipends to the farmers to compensate them for their time investment.

The interviews and focus groups were recorded and transcribed (verbatim). Two members of the research team coded the transcripts according to a coding protocol (see Appendix B). The codes relate to the theoretical framework to allow for a structured analysis. In line with Miles and Huberman (2013) the interviews and focus group reports were summarized in tables per case study organised with columns for individual farmers (one column with quotations from the interview, one column with quotations from the focus group) and rows for codes. In addition, each case study table included a column for joint constructions. This summary allowed for configuring as well as aggregating analysis (Gough et al., 2013): per case study we looked for complementary concepts (such as various aspects of 'good farmer'), while between case studies we looked for similarities and dissimilarities. Each case study table was coded for relations between the concepts (such as between 'good farmer' and 'good landscape') and for evidence of change of view or change of cultural norms.

Table 1

How the respondents in the case studies scored themselves according to the levels of nature-inclusive farming as defined by the Ministry of Agriculture: 0 = the baseline of legislation and GAP (Good Agricultural Practice); 1 = agrienvironmental management; 2 = agri-environmental management combined with use of ecosystem services and/or circular farming; and 3 = a totally integrated agro-ecological farming system.

	Midden- Limburg	Noord- Beveland	Achterhoek	Noordelijke Friese Wouden
Level 0		1		
+2				
Level 1	3	4	4	
Level	1	1	1	
1-2				
Level 2	1			6
Level 3	1		1	

4. Results

4.1. Respondents' involvement in nature-inclusive farming

The agri-environmental measures implemented by the respondents vary with the landscape, such as protection of waders ("meadow birds") and the lay-out of shallows in the open meadow landscape of Noordelijke Friese Wouden (NFW), creation of habitat for partridges and management of orchards in Midden-Limburg (ML), management of tree hedgerows in Achterhoek (A) and the lay-out of flower strips for the promotion of natural enemies (predators of harmful organisms) in the arable fields of Noord-Beveland (NB). In addition, in Midden-Limburg, Achterhoek and Noordelijke Friese Wouden some of the respondents manage land that is owned by nature organisations. Soil management is important in all case study areas: raising soil organic matter, prevention of soil compaction and/or no till practices. All farmers in Noordelijke Friese Wouden practice circular farming: optimising farm management by reducing inputs as well as emissions. In sum, respondents practice various aspects of nature-inclusive farming: taking care of biodiversity (e.g. protection of farmland birds), making use of biodiversity (e.g. natural pest reduction) and reducing negative impacts on biodiversity (e.g. circular farming).

4.2. Cultural norms regarding 'a good farmer'

The conceptions of the respondents of the characteristics of a 'good farmer' differ. However, their combined views give the following picture. A good farmer takes good care of land, soil and livestock. Good breeding and cropping skills are preferably combined with good financial management, entrepreneurship and innovativeness, but farmers who master all these skills are rare. The NB focus group: "A good farmer is a good work master. Someone who farms well economically. That is a good farmer. Someone who takes care of his land, his cattle and the product and who generates a good income I consider a good farmer" (NB6). "I largely agree with that. I want to add, I think that in addition a good farmer must have attention for the environment and the nature that he works with. He must not harm that, for example" (NB4). "Yes, I fully agree with that. (...) A good farmer is someone where the smoke goes against the wind so to say. So there are not many of those" (NB1). "Yes, I also agree with most of that. Personally I think that as a farmer I see that it is more aimed at the crops themselves than the whole total. You can have a good farmer with fantastic crops and when it rains there is water everywhere on the land except on his land, but that does not mean that he is a good tradesman. Of course, the whole picture must be complete, but ..." (NB5). A good farmer takes into account the environment, biodiversity and society. "A good farmer is someone who, with an eye for nature, people and himself, can grow a good *crop*" (*ML3*). He or she works hard but not too hard, can combine work with a private life, and is happy. "I do not want to be a slave of my farm" (NFW6). When a farmer has a bad yield or goes bankrupt, this does not always mean that he or she is a bad farmer: it can also be a sign of bad luck. A bad farmer is unethical: he treats the livestock badly, ploughs too far and exploits the soil. The respondents value diversity among farmers and stress that each farmer should be free to practice her own style: "A farmer who focuses on cost reduction is not better or worse than a farmer who aims for maximum production" (A1).

4.3. Cultural norms regarding 'a good agricultural landscape'

A good farmer can be recognized by the landscape. "With extreme weather you can see from the crops who are the better and who are the worse farmers" (ML5). A good landscape is tidy, neat, with straight lines, healthy livestock, an even, healthy crop, no weeds, and no stagnant water. Good land has a soil with a high organic matter content and is fertile. "Good land must yield" (ML6). However, what is 'good' depends on the purpose of the land. When the objective is biodiversity conservation, good land does not need to look so tidy. "The land is well-

managed, when it complies with its function. When its function is the cultivation of potatoes, then there must be potatoes. (...) When the potatoes are good, then there are no weeds. (...) But if you say the primary goal is to enlarge the population of Lapwing, then it should not be a tidy field of potatoes" (NB6). Respondents note that wet shallows on grasslands in spring attract many meadow birds and that a high variety of plants (weeds included) is important for insects. Some of them consider biodiversity, such as in the form of flower strips, as 'a crop': "Look, I consider those nature friendly crops that are in fact subsidized or payed by the community simply as a crop and as a crop with not a bad [financial] balance. And such a crop that pays nicely and that I agree with and what I find an enjoyable crop. Yes, of course, I like to do that, so for me that is an opportunity. I prefer that to growing potatoes with a high environmental impact" (NB4). Producing biodiversity requires skill and farmers may be better at that than nature organisations: "I do not believe that the natural areas have more meadow birds than our farmland" (NFW2).

4.4. The role of the opinion of peers and self-identity in farm management decisions

Most of the respondents in our case studies monitor the land management of their colleagues while driving around, to benchmark these colleagues against themselves and to learn from them. They look while driving past on occasion, but they also drive around on purpose: "On Sundays, everyone drives past the field from time to time, to see how the crops look. Looking and comparing, that's normal." (ML2 during a focus group meeting). "I think it is nice to compare when you have the same crop. When you have sugar beets, then you see how they are harvested and you know which have been irrigated. You always drive around so you know who has irrigated and how many times. When they are being harvested you drive an extra round and then you look." (ML2).

While in Achterhoek farmers confront each other about 'bad' management (see quote of A4 below), in the culture on Noord-Beveland one does not criticize his colleague to his face: "In general, I think that it [the land of other farmers on Noord-Beveland] looks neat. Of course there are always a few of whom I think that they could do better, but those are always the same ones. (...) All the farmers are driving around and they are all looking everywhere. Of course they have an opinion about that. (...) When you hear them they are mostly positive. They tell negative opinions to the neighbour but not to you." (NB6). According to NFW5 "there is a huge level of social control in agriculture." However, although farmers know that their colleagues drive around as well and have an opinion about their land and craftmanship, in all case studies they say that they do not give their colleagues' opinions much weight in their own farm management decisions. Some stress their independence: Interviewer: "Do you think that other farmers also have an opinion about your land and how that is managed?" A4: "Oh yes I think so."

I: "Do you hear such things?" A4: "Sure, everybody has critical remarks at times. Last summer I also received them. And that is of course to challenge each other a bit. I was asked this summer whether I was planning to continue farming or not. I mean, we were keeping the cows in the meadow and started rotation grazing in May and when it got dryer in June I did not mow the grass and the grass got seed and it looked like straw, and we live along a busy road so people thought 'that farmer quit farming'. Then they have an opinion about that and that is just fine and I was thinking: we will speak again half September. Well, I made it smooth [i.e. mowed it] at the end of August and then it started raining and half September the cows were in beautiful green lattermath and several people were amazed. And I like that. You feel that people talk about you, keep an eye on what you do but that is human." I: "But you do not do anything with it, or do you take that personally?" A4: "Well, I laugh about it. I think I know what my goal is and I will get there. I like that." Many consider what other farmers do, but still make their own choices: "There is an influence. If all farmers do the same, then you sometimes think what am I doing wrong, am I doing the right thing? In the end I determine it myself, but it gives stress" (NFW 5 during a focus group meeting). For farmer NB6, the cultural norm of clean fields aligns with his self-identity:

"Everyone is to some extent concerned with how they are viewed. That will be more important to some than to others. I think it is important that my plots are nice and clean for myself but also for the outside world yes" (during a meeting with the focus group). Nevertheless he claims to make autonomous choices: "I don't let colleagues guide me when it comes to building plan or fertilizer choice" (during the interview). In the end it is about the farmer that they want to be themselves: "I was an agricultural advisor for a number of years and then you come across many farms. If you are satisfied with how you do it, it does not matter whether someone thinks that you are a bad farmer." (ML6).

The fact that farmers say that they do not give their colleagues' opinions much weight in their own farm management decisions may mean two things. Respondents may have been reluctant to admit that the opinion of peers influences their decisions and they prefer to see themselves as autonomous. Or, self-identity may be more important than the anticipated opinion of others in farm management decisions. In addition, we suspect that the local farming community has become less important as a source of influential peers, as a result of the decline of the number of farmers in the rural areas (the total number of farms in the Netherlands was 97,389 in 2000 and 52,695 in 2020, CBS 2021), increasing specialisation, and the development of alternative agrarian subcultures such as national farmer networks. Most farmers are a member of multiple farming subcultures: not only the community of local farmers, but also for example the subculture of a specific farming system, a producers' cooperative and a study group. In addition, many farmers are active on social media. Farmers are part of society and are sensitive to opinions from outside the farming community. Some of the respondents told us that they consider it important to receive public appreciation for their work. A dairy farmer in Midden-Limburg keeps his cows in the field as much as possible because he considers it good for the public image of the sector. In Achterhoek there is a strong sense among famers that their efforts to upkeep the landscape are underestimated by the general public. They collectively feel that society should appreciate farmers more for what they already do.

That there is not one pressing set of good farming norms is illustrated by the fact that farmers in all case studies appreciate diversity among farmers: "Everyone farms in his or her way, so I think that you should have a certain freedom, I mean, you do not have to do the same as everyone else" (A5). "Everyone should do it in his own way. The diversity in the sector is what makes it beautiful. If everyone were equal then it would be no fun" (NFW2).

4.5. The role of farmer groups in fostering change in cultural norms

In our research the role of one particular agrarian subculture became apparent: that of the agri-environmental collectives. These are regional groups of farmers who participate in agri-environmental management. The collectives recruit farmers for agri-environmental management, train them, and organise monitoring and group meetings including field visits. Respondents report that the collectives are important to them in learning, including learning about ecology. From the Noord-Beveland focus group: "There is support from the collective to make the monitoring easier, what is a Meadow pipit, and to what extent can you [serve] other target species ... for that of course is still a bit difficult" (NB3). "Last year the collective organised several excursions with that purpose" (NB4). Participating in agri-environmental management and being a member of a collective has caused a change of view for several of them. After many years of experience in agri-environmental management an arable farmer in Noord-Beveland says: "I find nature increasingly more enjoyable" (NB1). An arable farmer in Midden-Limburg says about nature: "You think differently about it, yes. You do think differently about it, and easier too" (ML1). A mixed farmer in Midden-Limburg: "It is like buying a new pair of glasses. So like last summer it is very nice to see that whole partridge strip in bloom with the sunflowers and all, and then to look out for the partridges" (ML2). Later on she explains how she has learnt to recognize and appreciate agri-environmental measures on the land of others: "I think

that it is still very unknown with colleagues. For example we have a man nearby who by now has more agri-environmental management than normal arable fields so to speak, and I know what he is doing with planting all those hedges along the road. You recognize what you see. But if you do not know anything about agri-environmental management, then he is a mess maker. The difference is really who knows about it and who doesn't. Someone who does know a bit about it, will say: smart guy, he makes more money with that than with those meagre beets of last year". A dairy farmer in Noordelijke Friese Wouden says about his local colleagues: "At first they thought I was mad when I implemented wet shallows for meadow birds, but now nobody is surprised any more" (NFW4). This new practice, that used to be associated with 'bad farming' (water on the land!), has become acceptable because it attracted many birds and became more visible in the landscape when more farmers adopted it.

That biodiversity-friendly practice, as well as recognizing it on the land of others are not self-evident skills, is illustrated by the case of Noord-Beveland. Here, arable farmers have insufficient experience with natural pest reduction to dare to wait with pesticide application until the natural enemies have become numerous. In addition, this skill so far lacks recognizable visual symbols. From the focus group discussion: Interviewer: "For prestige you could look at hectares but you could also draw your prestige for example from using very little pesticides, because you know very well how to work with natural enemies". NB4: "But is that known with others". NB3: "That is hard to see, isn't it. A hectare of land you can see."

4.6. Comparing case studies: differences and similarities

Our case studies show many similarities, but also some differences. Table 2 summarizes the findings per case study. Cultural norms for 'a good farmer' and 'a good agricultural landscape' seem quite similar between the case studies. In Noordelijke Friese Wouden the attention for circular farming is apparent, which is not surprising because the approach was more or less developed here (Stuiver, 2008). While diversity among farmers is appreciated in all case studies, Achterhoek stands out for the reluctance to judge other farmers. In addition, no quotations about cultural change were found in Achterhoek, in contrast to the other case studies. The attitude towards nature-inclusive farming and the nature-inclusive themes that are relevant to the farmers are strongly related to the landscape. In Noord-Beveland, the open landscape has very few natural handicaps and the clayey soil is fertile. The intensity of the arable production and especially the crop rotation (potatoes once in 5-6 years is considered 'extensive') is seen as relevant to nature-inclusive farming, as well as flower strips, natural pest reduction and soil quality. For farmers in Midden-Limburg, Achterhoek and Noordelijke Friese Wouden, nature-inclusive farming practices come natural to them because these practices suit the landscape (small-scale and/or wet conditions). In addition, the Frisian farmers explain this attitude by the local culture and long history of agri-environmental management in their area. They are particularly proud of their agri-environmental collective.

In sum, cultural norms regarding 'a good farmer' and 'a good agricultural landscape' are relevant to farm management decisions in our case studies. However, our findings suggest that the role of self-identity is more important than the role of the opinion of (local) peers. While production-oriented conceptions of 'a good farmer' and 'a good landscape' are still dominant in the subculture that we studied - the subculture of farmers participating in agri-environmental management - we observed a shift in cultural norms towards a broader conception of both the notions of 'a good farmer' and 'a good landscape'. Part of the embodied cultural capital that is needed for nature-inclusive farming both for the production and the assessment of a 'good nature-inclusive landscape' is still underdeveloped. 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 agrienvironmental collective is particularly important for their knowledge of ecology.

5. Discussion

5.1. A broader conception of 'a good farmer' and 'a good landscape'

Our findings diverge from the literature on a number of aspects. First, the combined case studies yield a broader conception of 'a good farmer' and 'a good agricultural landscape' than reported so far. The literature describes 'a good farmer' as hard-working, taking good care of land and livestock, entrepreneurial, a good neighbour and taking responsibility for the environment (Burton, 2004; Burton et al., 2008; McGuire et al., 2013; Saunders, 2016; Sutherland and Burton, 2011). Our respondents add innovativeness, responsibility towards biodiversity and society, a good work-life balance, and happiness. A 'good agricultural landscape' is described in literature as a 'tidy landscape' (Burton, 2004; Burton et al., 2008; Burton and Paragahawewa, 2011; de Krom, 2017; Schmitzberger et al., 2005). However, according to our respondents, what 'good land' should look like depends on its purpose. Land with a biodiversity objective does not need to look so tidy. Biodiversity can be a production objective, just as food.

5.2. Diversity and change of cultural norms in farming

In contrast to Burton (2004) we did not find much evidence that Dutch farmers practice 'roadside farming'. They do drive around and

Table 2

Overview of case studies. The contents of the cells are	aggregated summaries of the interviews and focus groups.
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Case study	Midden-Limburg	Noord-Beveland	Achterhoek	Noordelijke Friese Wouden
Farming systems	Diverse	Arable	Dairy	Dairy
Nature-inclusive	The landscape is small scale anyway	Less intensive is better (crop rotation $1/5-6$)	We already have those landscape features	Suits this landscape and the local culture
Themes	Partridge, hedges	Natural pest reduction, soil quality, flower strips	Tree hedgerows	Strips along ditches, waders, circular farming
Good farmer	Good crop, healthy cows, good entrepreneur, social, diversity is good	Takes care of the land, good entrepreneur, social	That is different for everybody	Has the farm in balance (inputs and outputs, circular farming)
Good land	Tidy, taken care of, but what it should look like depends on the objective	Tidy, straight and neat, but what it should look like depends on the objective	No weeds, good yield	Evenly green, well drained, high in organic matter, but what it should look like depends on the objective
Driving around and roadside farming	Everyone drives around, but you don't confront each other	Everyone drives around, but you make your own decisions	People have and opinion, but everyone farms in his own way	People watch each other, but you do not take that into account too much.
Learning	Collective, parents, colleagues, study group	Cooperative advisors, demonstration farm, collective	Colleagues, interns, study groups	Study groups, colleagues, collective
Change of view/ cultural change	Use less pesticides, less admiration for new stables, appreciation of agri-environmental measures of others	Nature is increasingly enjoyable, more appreciation for useful insects	-	Shallows are no longer abnormal, 'birdland' can also be good land

know that their colleagues do the same, and they do feel their scrutiny, but they say that this does not really influence their management decisions. Self-identity may be more important for farm management decisions than the opinion of local colleagues, and other (agricultural) subcultures may have become more important for the formation of self-identity than the local farming community. Our respondents value and defend diversity of farming styles.

While Burton and Wilson (2006) and Saunders (2016) did not find evidence of changing cultural norms as a result of agri-environmental policies, Burton (2004) suggested that new roles and practices could change the meaning of 'good farming'. Burton and Paragahawewa (2011) suggested that group payments could make untidy landscapes to be more easily associated with good farming practice. So far, however, very little empirical evidence has been reported of changing cultural norms in farming. Lavoie and Wardropper (2021) observed that conservation tillage was a way for farmers to link conservation values as well as production values to the good farming identity. Sutherland (2013) found that well-visible 'professional and orderly' organic practice fostered a slight shift in the perception of organic farming amongst conventional farmers. Sutherland and Darnhofer (2012) report changing views with farmers as a result of their experience with implementing flower strips or organic farming. In Cusworth (2020) farmers report a 'change of mind' as a result of participation in agri-environmental management. They have learned the point of the measures (e.g. water quality or food for birds in winter) and disapprove of poor agri-environmental management of their colleagues. In our study we observed changing cultural norms as a result of participation in and visibility of agri-environmental management. This is most in line with McGuire et al. (2013), who found changing notions of the 'good farmer' identity in a group of farmers participating in agri-environmental management, monitoring and social learning. It is also in line with Riley (2016), who found changed cultural norms after long term participation in agri-environmental management.

5.3. Developing cultural and social capital in a subculture

Sutherland and Burton (2011) demonstrate how cultural capital in the form of status as 'good farmer' can yield social capital in the sense of trust of and collaboration with neighbours. Our case studies suggest, in line with Bourdieu (1986), that social capital can also support the development of cultural capital. In our case studies, collective agri-environmental management contributed to the build-up and transfer of nature-inclusive cultural capital through introducing nature-inclusive farming practices, increasing the visibility of nature-inclusive practices in the landscape, and facilitating learning by farmers. Membership of a group yielded new skill to produce a different kind of landscape as well as to recognize this skill on the land of others. In addition, in this group, nature-inclusive skill yielded appreciation of peers. These findings are in line with those of Runhaar and Polman (2018) who describe how farmers who were active in meadow bird protection found recognition in a national farmer network organised by Birdlife Netherlands while they did not find it among their neighbours. The agri-environmental collectives form a subculture in which nature-inclusive cultural capital yields social capital and vice versa. This way, the collectives have become key agents in cultural change.

5.4. Discussion concerning focus and approach of this research

This explorative study provides an indication of the relevance of cultural norms for farmers' behaviour in relation to biodiversity. For a more complete understanding of what is needed to support nature-inclusive choices of farmers other factors should also be studied, such as access to land, relationship with land owners, market demand, the influence of regulation, level playing field, education and finance (Dessart et al., 2019; Mills et al., 2016; Schoonhoven and Runhaar, 2018; Wauters et al., 2017). In addition, as our focus was on cultural

norms within the farming community, we did not study how cultural images of 'the good farmer' and 'a good agricultural landscape' as held by other, non-farming stakeholders affect these cultural norms. Nevertheless, some of the respondents brought up the issue themselves. Most likely, non-farmers' understandings of 'a good farmer' and 'a good agricultural landscape' do play a role in shaping farmers' self-identity and cultural norms and this role warrants further research (de Krom, 2017; Riley, 2016; Van Herzele et al., 2013).

6. Conclusions

In this article we investigated whether nature-inclusive farming is compatible with cultural norms in Dutch farming communities regarding 'a good farmer' and 'a good agricultural landscape'. We found that according to the respondents a 'good farmer' takes good care of land, livestock and soil, has the business side of the farm in order, behaves responsibly in relation to society and the environment, is social and happy and works hard, but not too hard. Whether this cultural norm offers opportunities or threats to nature-inclusive agriculture depends on the interpretation of these notions by individual farmers. Taking good care of the land can mean that landscape elements are protected, but also that the land is kept completely free of weeds. Responsibility for the environment can mean opting for organic, but it can also imply a conscious use of pesticides. Entrepreneurship can be about producing as much as possible, or about using subsidies and saving costs in a smart way. For nature-inclusive agriculture the discussion about what makes a good farmer is relevant.

A good farmer is recognizable by his or her land. Good land is mainly clean, tidy, with straight lines, without weeds or wet parts. Most of this is not good news for nature-inclusive agriculture, as it invites the use of chemical pesticides and leaves little room for 'messy' and wet landscape elements and for herbs that are beneficial to biodiversity including natural enemies and pollinators. However, the interest of farmers in raising organic matter in the soil is in line with nature-inclusive agriculture.

Although nature-inclusive agriculture is not fully compatible with the current cultural norms in agriculture as we found in the subculture studied, the research does show various clues for policy to promote that nature-inclusive for more farmers can become part of what 'a good farmer' does. First, farmer groups can contribute to cultural change through providing subcultures for the development of new cultural capital as well as social capital for its recognition (symbolic capital). Based on this insight, governance implications may entail support for nature-inclusive farmer groups such as the agri-environmental collectives, and other farmer organisations and study groups that help farmers develop nature-inclusive craftsmanship and strengthen the connection between agriculture and nature, and farmers and their landscape. This can be done through targeted subsidies for organization, regional and local processes, learning networks, on-farm experimentation, and through closer collaboration in regions. Such policies should respect and foster heterogeneity among farmers, because this diversity is a resource for innovation and its appreciation in the farming community is a condition for cultural change. We propose that nature-inclusive farmer groups such as the Dutch agri-environmental collectives can help bridge the boundaries between farmers and government, farmers and citizens, and farmers and nature organisations (see also Westerink et al., 2020b).

Second, according to farmers biodiversity can be a production goal in addition to food and in that case land may look a bit messy. Based on this insight, nature-inclusive agriculture can be promoted through providing information on business models and through result-based payment schemes that attach recognition and income to biodiversity achievements (see also Burton and Paragahawewa, 2011). Since result-based schemes often need a landscape approach, farmer groups could help with the implementation (Westerink et al., 2017). Third, farmers need visible symbols for the display of their skill as good nature-inclusive farmer, such as wet shallows and wide field edges (visible in landscape) and number of meadow birds (e.g. visible on a website) (see also Burton and Paragahawewa, 2011). Based on this insight, indicators could be discussed and developed together with farmers, monitoring results published, benchmarking organised, and best practices publicly appreciated. Also this can be organised in collaboration with farmer groups.

Cultural norms regarding 'a good farmer' and 'good agricultural landscapes' are subject to change. Our study shows that they can evolve as a result of the introduction of new, visible practices. 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.

Author statement

The individual contributions of the authors to the paper are: Judith Westerink: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Marcel Pleijte: Conceptualization;

Appendix A. Semi-structured interview and focus group questions

In Dutch as used in the field, translated into English. Individual interview questions. (Instruction to the interviewer). Vooraf (Before you start):

- Vertel waar je voor komt (Explain the purpose of the interview)
- Vertel wat er met het verslag gebeurt (Explain what we do with the report of the interview)
- Bespreek anonimiteit (Discuss that in publications the interview statements cannot be traced to participants)
- Vraag om toestemming opname (Request permission for recording)

Tijdens/na (During and after interview):

- Probeer het binnen 1,5 uur te houden (Try not to exceed 1,5 h duration)
- Ga als het lukt even met de boer naar zijn/haar land kijken (en maak hier aantekeningen van) If possible, together with the farmer have a look at his/her land and take notes)
- Stuur achteraf het verslag op (het wordt woordelijk uitgetypt) (Send the verbatim transcription to the interviewee for information)

Intro/kennismaking (introduction)

- 1. Hoe ziet uw bedrijf eruit? (incl. pachtgrond/eigen grond, ligging, vee, gewassen, etc) (Tell me about your farm (incl. land tenure/ownership, position, livestock, crops etc.))
- 2. Hoe ziet u de toekomst van uw bedrijf? (How do you envision the future of your farm?)
- Zelf-identiteit en goede boer (Self-identity and good farmer)
- 3. Wat voor boer bent u? (What kind of farmer are you?)
- 4. Op welke momenten bent u trots? (At what moments are you proud?)
- 5. Waar doet u het voor? (For what do you do it?)
- 6. Wat is volgens u een goede boer? Waar herkent u die aan? (What is a good farmer according to you? How do you recognize one?)
- 7. En een slechte? (And a bad one?)

Goed land (good land)

- 8. Hoe ziet goed beheerd land eruit? (What does well managed land look like?)
- 9. Wat vindt u van het land van uw buren/boeren in de buurt? (What do you think of the land of your neighbours/farmers nearby?)
- 10. Denkt u dat anderen ook een mening hebben over uw land? Wat doet u daarmee? (Do you think that others also have an opinion about your land? What do you do with those opinions?)

NIL (Nature Inclusive Farming).

- 11. Wat doet u nu voor of met de natuur? Sinds wanneer? (What do you already do for or with nature? Since when?)
- 12. Bent u daardoor anders over landbouw en natuur gaan denken? (Did your ideas about farming and nature change because of that?)
- 13. Zou u meer willen doen voor of met de natuur? Wat? (Would you want to do more for or with nature? What?)

Formal analysis; Investigation; Methodology; Validation; Roles/Writing - original draft; Writing - review & editing. Raymond Schrijver: Conceptualization; Investigation; Visualization; Roles/Writing - original draft; Writing - review & editing. Rosalie van Dam: Funding acquisition; Supervision; Roles/Writing - original draft; Writing - review & editing. Michiel de Krom: Conceptualization; Supervision; Roles/Writing - original draft; Writing - review & editing. Tineke de Boer: Data curation; Formal analysis; Investigation; Validation.

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- 14. Wat zou u helpen om meer voor of met de natuur te doen? (What would help you to do more for or with nature?)
- 15. Hoe deelt u zich in als het gaat om natuurinclusieve landbouw (How do you position yourself with respect to nature inclusive farming):
 - a. Voldoen aan wettelijke eisen (Comply with legal requirements)
 - b. Agrarisch natuur-en landschapsbeheer (betaald of onbetaald, i.s.m. collectief of anders) (Agri-environmental management (paid or unpaid, in collaboration with collective or otherwise))
 - c. ANLb plus stimuleren van bodemleven/natuurlijke plaagbestrijding/sluiten van kringlopen (Agri-environmental management plus stimulating soil life/natural pest reduction/closing nutrient cycles)
 - d. Bedrijfssysteem waarin natuur en landbouw zijn geïntegreerd (Farming system in which nature and agriculture are integrated)

Collega's (Colleagues).

- 16. Waarover spreekt u met uw collega's? (What do you speak about with colleagues?)
- 17. Doen boeren in dit gebied dingen samen? (Do farmers in this area do things together?)
- 18. Bij wat voor dingen kijkt u graag de kunst af bij collega's? (With what kind of things do you like to learn by watching how your colleagues do it?)
- 19. Wanneer wordt je boer als boer in dit gebied gerespecteerd door je collega's? (What makes that a farmer in this area is respected by his colleagues?)
- 20. Wat vinden uw collega's van uw manier van boeren? En van uw toekomstplannen? (ref. vraag 1 en 2) (What do you colleagues think of your way of farming, and your plans for the future? (ref. question 1 and 2)
- 21. Wat zouden uw collega's ervan denken als u meer voor of met natuur gaat doen? (ref. vraag 13) (What would be your colleagues' opinion when you would do more for or with nature? (ref. question 13)

Slot (conclusion).

22. Wat is nog niet aan bod geweest, wat u wel graag wilt vertellen? (What has not been discussed yet, that you would still like to tell?)

Focus group questions. (instruction to the moderator).

- Vertel het doel van de bijeenkomst (Explain the purpose of the meeting)
- Vertel wat er met het verslag gebeurt (Explain what we do with the report)
- Bespreek vertrouwelijkheid (Discuss confidentiality of what is said in the group)
- Maak een geluidsopname (leg uit waarom: anders missen we teveel in het verslag) (Make a recording and explain why: otherwise we miss too much in the report)
- Probeer het binnen 2 uur te houden (Try not to exceed a 2 h duration)
- Stuur achteraf het verslag op (After the meeting send the transcription to the participants for information)

Goede boer/goed land (good farmer/good land).

- 1. Wat is volgens u een goede boer? Waar herkent u die aan? (What is a good farmer in your opinion? How do you recognize one?)
- 2. En een slechte? (And a bad one?)
- 3. Wat geeft een boer status in dit gebied? (What gives a farmer in this area status among peers?)
- 4. Hoe ziet goed beheerd land eruit? (What does well managed land look like?)
- 5. Houden boeren er rekening mee hoe collega's naar hun land/erf/machines kijken? (Do farmers take into account how colleagues look at their land/yard/machinery?)

NIL (nature-inclusive farming).

- 6. In hoeverre past natuurinclusieve landbouw in dit gebied (To what extend is nature-inclusive farming suitable for this area):
 - a. Voldoen aan wettelijke eisen (Comply with legal requirements)
 - b. Agrarisch natuur-en landschapsbeheer (betaald of onbetaald, i.s.m. collectief of anders) (Agri-environmental management (paid or unpaid, in collaboration with collective or otherwise))
 - c. ANLb plus stimuleren van bodemleven/natuurlijke plaagbestrijding/sluiten van kringlopen (Agri-environmental management plus stimulating soil life/natural pest reduction/closing nutrient cycles)
 - d. Bedrijfssysteem waarin natuur en landbouw zijn geïntegreerd (Farming system in which nature and agriculture are integrated)
- 7. In hoeverre is meer NIL in dit gebied wenselijk? Waarom wel/niet? (To what extend would more nature-inclusive farming be desirable in this area? Why/why not?)

8. Wat zou boeren in dit gebied helpen om natuurinclusiever te worden? (What would help farmers in this area to become more nature-inclusive?) Boeren onder elkaar (Farmers amongst each other)

- 9. Hoe wordt in dit gebied gesproken over boeren die iets met natuur doen? (How do farmers in this area speak about farmers who do something with nature?)
- 10. Werken in dit gebied boeren graag met elkaar samen? (Do farmers in this area like to work together?
- 11. Wat voor boeren worden als een voorbeeld gezien? (What kind of farmers are seen as a good example?)

Slot (Conclusions).

12. Wat is nog niet aan bod geweest, wat wel belangrijk is? (What has not been discussed yet, that is still important?) Appendix B. Codes

Code	Meaning (Dutch)	Translation
zelf	Goede boer (zelfidentiteit)	Good farmer (self-identity)
drijf	Drijfveren	Motives (in the sense of driving values)
goed alg	Goede boer (indiv)	Good farmer (opinion of farmer)
goed cult	Goede boer: wat geeft status (culturele norm)	Good farmer: what gives status (cultural norm)
slecht	Slechte boer (indiv)	Bad farmer (opinion of farmer)
slecht cult	Slechte boer (culturele norm)	Bad farmer (cultural norm)
land	Goed landschap (indiv)	Good landscape (opinion of farmer)
land cult	Goed landschap (culturele norm)	Good landscape (cultural norm)
nil	Natuurinclusieve Landbouw	Nature-inclusive Farming
meer	Wat zou helpen om meer voor/met natuur te doen	What would help to do more for/with nature
oordeel	Boeren die elkaar beoordelen	Farmers judging each other
samen	Cultuur van samenwerking	Culture of collaboration
anticipatie	Wat je je aantrekt van de mening van andere boeren	Taking opinions of other farmers into consideration
leren	Leren van elkaar	Learning from each other

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