

## **‘De Oerakker’: how to preserve it?**



MSc thesis - CPT- 80836 - Jeroen Kappelhof (1017423)  
Supervisors: Conny Almekinders (WUR- KTI) & Chris Kik (WUR-CGN)  
Date: 16-07-2021

# Preface

This document is the result of an MSc Thesis research project. The MSc student, Jeroen Kappelhof, the WUR-supervisors and principal representatives have agreed that this document should be publicly available. It should however be kept in mind that an MSc Thesis is the result of a learning process and is marked as such. It means, in this case, that this document valuable information but also has some weaknesses. Whereas we consider that the interviews represent empirically credible, well recorded and citable information, the analysis has shortcomings in the ordering of the information and distilled insights. The document has not been subject to language editing. The annex has been added to increase the accessibility and value of the information from the interviews. With these observations in mind, we believe this thesis research findings might be used and cited by others.

Jeroen Kappelhof, Conny Almekinders and Chris Kik

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## Abstract

Agrobiodiversity is still in decline, despite the raising awareness about the topic, the load of evidence about its importance and the actions of policymakers and organizations worldwide. A multitude of stakeholders is involved in the fight against the loss of agrobiodiversity. Citizens' initiatives, like community seed banks (CSBs), are also involved, but still understudied. Continuity and stability are an important prerequisite for CSBs, in order to contribute to the preservation of historic, rare cultivars. In this study the discontinuity and instability of the Dutch CSB called 'de Oerakker' has been studied. Interviews have been taken with 21 members of 'de Oerakker'. Interviewees were asked to their views on the functioning of 'de Oerakker', their motivations to participate within this CSB, and how they perceive and co-shape the structure and organization of 'de Oerakker'. By analyzing 'de Oerakker' as a boundary object it became clear that members shared their passion for the preservation of Dutch historic cultivars and had same ideas about how 'de Oerakker' should be structured. The lack of professionalism and decisiveness was mentioned as the main cause of the instability of 'de Oerakker'. Furthermore, poor internal communication leading to differing expectations and low involvement of the members led to frustrations and apathy among members. In addition, because of the lack of internal communication the potential benefit of the wide diversity in members that is present within the foundation has never been fully exploited. For future undertakings of any CSB it is important to realize that enthusiasm or passion about a certain topic is not enough for a CSB to be successful. Working towards a professional organization, including people with expertise about public relations or marketing, and carefully investigating people's perceptions of biodiversity are pivotal for getting a CSB successful.

## Introduction

### ***Agrobiodiversity: its decrease and actor involvement in its conservation***

Despite the raising awareness about the loss of agricultural biodiversity, the mounting evidence for the important role agricultural biodiversity plays in ensuring food security and nutrition, and the actions of policymakers and conservation organizations worldwide (Bommarco et al., 2013; Cunningham et al., 2013; Diaz et al., 2011; Pascual, 2021; Pinstrup-Andersen, 2013; Rockström et al., 2017; Sunderland, 2011; Tittonell et al., 2016; Tschardt et al., 2012), the diversity of production systems in the world is still in decline, and has even accelerated, in terms of its ecosystems, species, and plant genetic resources (Khouri et al., 2014; Macfadyen et al., 2015;

Pascual, 2021). Although thousands of plant species are cultivated for food, fewer than 200 species are contributing substantially to global food production. Moreover, just nine plant species account for 66% of total crop production.

Multiple stakeholders are involved in *in-situ* and *ex-situ* efforts to counteract the declining trend in cultivated species with all having their own roles and responsibilities. Governments can draw national policies that aim to protect and conserve the agricultural biodiversity or can adhere themselves to policies lined out in multilateral treaties about this topic, like the Convention on Biological Diversity (CBD) drafted in 1992 or the International Treaty on Plant Genetic Resources for Food and Agriculture (IT-PGRFA) drafted in 2001 (Secretariat of the Convention on Biological Diversity, 2001; FAO, 2009). Furthermore the public sector may directly operate projects and programs in fields such as, on-farm conservation or gene-banking, can help to facilitate agricultural biodiversity management via education and research programs or take measures that influence the actions of other stakeholders, for example via legal measures, provision of incentives or provision of information (FAO, 2019). Besides, there is a wide diversity of international organizations, networks and associations, like for example the Food and Agriculture Organization (FAO) and the Consultative Group on International Agricultural Research, that try to promote and support activities related to preserving agricultural biodiversity and to facilitate international collaboration in this field (FAO, 2010). Producers regardless of their scale have an influence on the agricultural biodiversity. Small- and medium-scale producers tend to use multiple products and services of the plants they grow. Diverse production environments and a diverse range of uses typically mean that a relatively diverse range of genetic resources is maintained. The maintenance, revival or adaptation of traditional management practices developed by small-scale producers often contributes significantly to the sustainable use and conservation of agricultural biodiversity, as do ongoing processes of innovation on the part of small-scale producers (FAO, 2019). In contrast, large-scale producers can often draw on technologies and inputs that enable them to base their enterprises on crops from a narrowing range of high-output species. Their access to inputs means that they can often operate relatively independently of the local ecological processes that have traditionally underpinned and constrained production. Their management practices and strategies can, however, have major detrimental effect on biodiversity both locally and at a greater distance (FAO, 2019). Large-scale, specialist companies are also playing an ever-greater role in breeding programs for cultivated plants, often focusing their efforts on a relatively narrow range of species, breeds and varieties (FAO, 2019). Other actors within the food chain as suppliers, processors, traders, and retailers also play a role, because their requirements influence the demand for raw materials and hence the characteristics of crops and subsequently the agricultural biodiversity. Furthermore, suppliers, processors, traders and retailers are also involved in a range of initiatives that contribute to the sustainable use and conservation of agricultural biodiversity (FAO, 2019). While many members of the general public have no direct involvement in the management of agricultural biodiversity, their choices as consumers and their political decisions and activities as citizens have the potential to increase or reduce pressures on agricultural biodiversity or influence its management (FAO, 2019).

## ***Community seed banks: their background, function, and continuity***

Non-governmental and citizens initiatives contribute in various ways to the sustainable use and conservation of agricultural biodiversity, including by promoting dynamic and sustainable management practices, including agroecology, at production-system level, promoting the marketing and consumption of local varieties or biodiversity-friendly products, or advocating policies that favor sustainable approaches to production (FAO, 2019). Community seed banks, an example of citizens initiatives that focus on the preservation of the agricultural biodiversity, have been founded since the early 1980s in many parts of the world, with various forms and functions (DIVERSIFOOD, 2018). Their main aims are to address the loss of agricultural biodiversity and to enhance access to seeds adapted to local conditions that the conventional market does not provide for, based on a participatory approach of community crop management and crop improvement and thereby trying to preserve such, in most cases historic, local varieties for later use and generations (DIVERSIFOOD, 2018). In Europe, the number of CSBs has increased rapidly during the last 15 years (DIVERSIFOOD, 2018). Initiatives do usually not refer to themselves as a community seed bank. Other terms that they use to identify themselves are: networks, houses, agro-initiatives, libraries or archives for seeds. This diversity of synonyms used reflects the general diversity in CSBs in Europe in terms of age, size, goals, stakeholder groups, areas and activities, as well as governance structures, roles, and concepts. This wide diversity in CSBs is an effect of most CSBs being originated from grassroots, local initiatives (DIVERSIFOOD, 2018). The initiatives work with a wide range of crops and manage, on average, several hundreds of accessions. The varieties CSBs work with are mainly of local and farmers' varieties and old commercial varieties as well as their own breeding populations (DIVERSIFOOD, 2018).

At this point little has been published about European CSBs, their functioning and continuity (DIVERSIFOOD, 2018). Getting to know more about their continuity is particularly important: because for CSBs to have a functional contribution to the preservation of historic, rare cultivars and to be some sort of back-up mechanism that prevents the loss of these materials, their continuity is the first logical condition and priority to be met. It is known that volunteer initiatives can have difficulties with involving their volunteers in an effective way, so that the volunteers are likely to continue with their work (Harrison et al, 2017). In addition, the term agricultural biodiversity can mean totally different things to different people and therefore organizations that are focusing on the preservation of agricultural biodiversity need to take this into account in order to be effective and successful (Pascual, 2021). Furthermore, the lack of financial resources, leading to a shortage of manpower and technical equipment, as well as poor regulatory conditions are reported as the main obstacles for CSBs to be effective (DIVERSIFOOD, 2018). To contribute to the functioning and continuity of European CSBs, we study the Dutch CSB called 'de Oerakker'. This CSB, which is a voluntary citizen initiative, was started in 1995 by Ruurd Walrecht, who has been the driving force behind this foundation till 2006 (De Oerakker, n.d.; Haagsma, 2002). Today this CSB consists of three networks, namely 'Eeuwig Moes' focusing on the preservation of rare vegetable cultivars, 'de Bekoring' focusing on the preservation of rare grain cultivars, and 'het Nationaal Fruit Netwerk' focusing on the preservation of rare fruit cultivars (De Oerakker, n.d.). Since the beginning, 'de Oerakker' has

gone through several cycles of re-newing itself, at times leading a simmering existence until energized again by new board members (C. Kik, personal communication; K. van der Vet, personal communication). In this study we use the boundary object to explore how the different members re-arrange or re-arranged themselves around 'de Oerakker', while having different definitions, practices and/or interests (Ewenstein & Whyte, 2009; Mollinga, 2010; Star & Griesemer, 1989). We will use the insights to explain why the community seed bank experiences discontinuity and instability over time, while it binds in many passionate volunteers that want to contribute to the conservation of historic, rare cultivars.

## Methods

We selected 21 interviewees from people who have at any point in time been registered as a member of 'de Oerakker'. A list with contact details of former and current members was obtained via a current board member of 'de Oerakker'. To cover the whole period from the start of 'de Oerakker' till now all former and current board members on this contact list were sent an interview request. We received a positive response from six former board members and three current board members, and these individuals were all interviewed. All board formations that there have ever been are represented by these nine former and current board member that were interviewed. Seven of the interviewees were chosen, because they are actively participating within the foundation according to the current board members or because their names were frequently popping up during the first round of interviewing. Two interviewees were chosen, because they are employees of the Centre for Genetic Resources, The Netherlands (CGN), 'de Oerakker' has close ties with the CGN and in order to have views of both sides included these two employees were asked for an interview. In addition, three candidates were selected randomly from the list of contact details in order to increase the likelihood that a representative cohort of the members has been interviewed. Due to the Covid-19 measures, 20 of the interviews were held online. One interview was held in real life, because this was preferred by the interviewee. Online interviews were recorded and stored for later use, when permission was granted by the interviewee. Interviews consisted of open questions. The three focal points during the interviews were; how members have perceived and experienced the functioning of the foundation, what their incentives are to participate within 'de Oerakker' and how they think that 'de Oerakker' should be organized.

## Results

### Brief history and overview of the foundation 'de Oerakker'

In 1995 Ruurd Walrecht established the foundation called 'de Oerakker' (<https://www.deoerakker.nl/nl/oerakker.htm>; Haagsma, 2002). The aim of the foundation, which operates as a CSB, was to work on the on-farm conservation of historic, rare cultivars, especially focusing on local varieties (Haagsma, 2002). Long before the start of the foundation (since the 1960s), Ruurd Walrecht and his wife Yvonne Walrecht were already working

intensively on the on-farm conservation of a huge variety of cultivars. At the start of the foundation in 1995, 'de Oerakker' was situated in Bakkeveen, the Netherlands, had 3,6 hectares of land available and the collection consisted of around 400 cultivars (Haagsma, 2002). Moreover, the foundation was also in contact with the Centre for Genetic Resources, the Netherlands (CGN) from which they received knowledge, tips and seeds of historic cultivars (pers. comm. C. Kik). After some years the owner of the land that 'de Oerakker' was using started to push Ruurd and Yvonne to move to another location, because he wanted to sell the land. Eventually Ruurd and Yvonne decided to leave the location in Bakkeveen, moved to a couple of other locations, and in 2004 they started a new life in Veenhuizen, the Netherlands. Here they wanted to continue with their work and together with Boele Ytsma they established a new foundation called 'De Nieuwe Akker', but later on they changed the name again to 'de Oerakker' (pers. comm. R. Walrecht). In 2006 Ruurd and Yvonne Walrecht decided to leave the Netherlands and emigrated to Sweden, leaving most of the collection in the Netherlands unattended (pers. comm. R. Walrecht; pers. comm. O. Bootsma). At that time the CGN offered the then board of 'de Oerakker' to save and manage the collection of Ruurd and Yvonne for them (pers. comm. O. Bootsma; pers. comm. C. Kik). Since that time the ties between 'de Oerakker' and the CGN became closer and closer. Furthermore, from that moment on the focus of 'de Oerakker' started to shift from actively preserving historic, rare cultivars through on-farm conservation to creating a network of people and organizations that were working on or enthusiastic about the preservation of historic, rare cultivars (pers. comm. O. Bootsma). The last couple of years the foremost activities of 'de Oerakker' were the meetings that were organized twice a year, once a year taking place in Wageningen at the CGN and once a year taking place at one of the members (pers. comm. K. van der Vet). As of today the network of 'de Oerakker' consists of 120-130 members in total and is subdivided in three sub-networks, namely the network 'Eeuwig Moes', which is focusing on the preservation of vegetable cultivars, the network 'de Bekoring', which is focusing on the preservation of grain cultivars, and the network 'Nationaal Fruit Netwerk', which is focusing on the preservation of fruit cultivars (De Oerakker, n.d.; pers. comm. K. van der Vet). The background of the 120-130 members is varying vastly, from hobbyists to middle-scale and large scale businesses to cultural organizations (pers. comm. K. van der Vet).

## Reflections of members on the functioning of 'de Oerakker'

### ***Lack of professionalism and decisiveness***

When being asked about the functioning of 'de Oerakker', multiple members are referring to the lack of professionalism (n=8) and decisiveness (n=9) within the organization. Members (n=4) mentioned that roles were not strictly assigned and that there was not a clear description of tasks. For example, two members mentioned that they both have held two board positions simultaneously for some time. In addition, people were not always carrying out the tasks that are associated with a certain role. One member recalled that in meetings *'the secretary at the time was often not there, so I took on that task. Nevertheless, those minutes have often not been officially approved. Other times the secretary was present, but did not take minutes.'* Linked to this, members (n=9) were often mentioning that the workload was always with the

same handful of people. Some were even stating that at some points the whole foundation was laying down on only one person. Related to that members (n=2) working at the Centre of Genetic Resources, The Netherlands (CGN) mentioned that the workload has most of the times been too much with the CGN. Other members (n=2) were thinking differently about this and told that they have been disappointed by the CGN, because in their eyes they never fulfilled the public function, for which 'de Oerakker' could have been their instrument according to these members, that the Ministry of Agriculture, Nature, and Food Security assigned to the CGN. However according to the staff of the CGN, they were not obliged to use 'de Oerakker' in their activities to fulfill this public function.

Furthermore interviewees (n=5) said that there was no external communication to a wider public about the activities of the foundation, although members are seeing external communication as important for the success of the foundation. Similarly, according to some of the interviewees (n=5) communication within the organization was also lacking or minimal. One of the members that was raising this point said: *'Communication with members was not always good at the time either. We now all come across documents that I was never presented with'*. In addition, another member said: *'We, as members, were never informed about things that were discussed within board meetings'*. An example of something that has been prepared by the board, but never shared with the members is the business plan written by one of the latest board members in 2017 and 2018.

Moreover, members (n=10) were referring to the yearly meetings as cozy and educational, but not as decisively. One member stated it like: *'I would say a committee of wise men. There were meetings, but they were nothing more than a little exchange of knowledge'*. Another member said: *'There were annual meetings, but nothing really happened'*. In the end members were getting frustrated about the fact that things never became concrete and clearly defined projects and plans were never initiated. Some of them dissociated from the foundation, because they were not satisfied anymore about the course of events. Someone said: *'Things that were decided together at a meeting never came to fruition. That got frustrating for the members. A kind of apathy developed. Some members separated from 'de Oerakker' because of this. That endless talking put people off'*. In this same period there were even some members that tried to set up on their own an initiative parallel to 'de Oerakker' that was called ProSpeciesRara NL, but it did not succeed either and after one year they stopped with this initiative. Next to this, members (n=4) felt that the organization was not only lacking decisiveness, but also a business mindset. One of the interviewees said: *'In addition, there were also no people within 'de Oerakker' who could look at it from a commercial perspective'*. Related to this multiple members (n=5) recalled that there has always been a lack of budget and that this has also been a hindrance to the continuity of the foundation. As one of them put it clearly: *'Without money, you can do nothing'*.

### ***Underestimation of the profession***

A couple of members (n=5) mentioned that they have underestimated the difficulty of propagating and conserving seeds in a proper way. For example, keeping the seeds pure bred is very difficult, they say. One of them said: *'The preservation of old varieties has actually never*



*taken off. That is also much more difficult than believed.* Someone else recalled the following: *'What also surprised me then is that most of the members called every year for a new batch of seeds. Very few people could harvest their own seed. Very few people were able to do this themselves'*. Two of the interviewees said that even for an institute as the CGN it is not easy to keep the seeds pure bred when propagating, let alone for small scale enterprises or hobbyists. For example, the small area of land available at some of these members have been problematic, especially for the propagation of seeds of cross pollinating species, according to the CGN staff. Because of these issues some members were arguing that the task of propagating seeds should not be a responsibility of the members anymore. Furthermore according to one member, accurately describing characteristics of different plant species, so that it is assured that everyone talks about the same species, also has appeared to be difficult for members, although attention has been paid to this subject and explanation has been given at some of the annual meetings.

### ***Wrong place and time***

When being asked to why 'de Oerakker' has never fully succeeded, some members (n=3) said that they have realized over time that the Dutch culture is maybe not the perfect breeding ground for initiatives like 'de Oerakker'. One of them said: *'We in the Netherlands use our best products for export. We are not proud of our Dutch heritage'*. In addition, someone else said: *'This is exemplary of the Dutch indifference and commercial spirit. In Germany, for example, the local structures are much stronger. There is more sense of community there'*. So, according to these members it is not only that Dutch people do not care that much for our living cultural heritage, but that also our local communities are not strong enough. Members (n=3) are not only talking about the Netherlands being the wrong place for an initiative like 'de Oerakker', but also about the past being the wrong time for an initiative caring about the preservation of agrobiodiversity. Some were arguing that they were too early, especially when they see the current awareness and attention for biodiversity. An interviewee said: *'People do have an idea of what biodiversity means, but agrobiodiversity you still have to explain to most of the people. At that time people didn't know anything about it'*. However, another member warned for too much optimism about the current attention for biodiversity and how that can be beneficial for the success of 'de Oerakker'. He said: *'We need to realize that the current attention for biodiversity does not automatically mean that people are also interested in historic, rare cultivars. More and more people want to have locally produced products, but they do not necessarily want those products to be of local cultivars'*.

### ***Lack of cohesion between members***

The wide diversity of members, ranging from large businesses to hobbyists and from organic farmers to non-organic farmers, has been encountered as a difficulty by some members (n=3). Not only the type of member, but also the members' facilities were ranging vastly, with some having huge business facilities and some having a small backyard. Some were saying that this wide diversity in sort of members made it difficult to agree on a shared goal and philosophy. For example, one of them said: *'The members of 'de Oerakker' are very diverse: from large seed companies to small vegetable gardens. This great diversity of members makes it difficult to set a*

*common goal*. Furthermore, some members (n=2) were stating that they sometimes got the feeling that members were just interested in what was in there ('de Oerakker') for them and not really cared about the progress of the organization. Someone memorized the following: *'Some members represented multiple interests. They talked a lot during the meetings and then after that everyone went their own way'*.

### **Project 'Orange list' has been a success**

According to multiple members the 'Orange list' project ([www.oranjelijst.nl](http://www.oranjelijst.nl)) has been one of the few successes of the past. The aim of this project that started in 2008 was to determine which varieties of Dutch origin should be seen as part of the Dutch living cultural heritage. Two retirees recruited by CGN have worked for seven years for one day per week on this project, during which they had access to the library of Wageningen University & Research. The coordination of this project was in full hands of the CGN. In total ca. 6000 varieties were identified that were grown in the Netherlands before WO II and from around 20% of these varieties seeds were still available. As a next step, the Heritage Seeds project was launched to propagate and describe seeds of around 400 varieties that were selected on the basis of specific criteria which qualified them as important constituents of the Dutch living cultural heritage. The coordination of this project was fully in the hands of two members of 'de Oerakker'. The success of this project is evaluated differently by members, with some of them calling it a success, like one of the interviewees who said: *'That Heritage Seeds project is going well. Communication and administration are running smoothly. Sending back seeds is going well. That project works'*. Contrary, other members (n=3) were saying that the success of the Heritage Seeds project is moderate to poor.

## **Members' incentives or motives to participate within 'de Oerakker'**

### ***Preserving agrobiodiversity***

Conserving historic cultivars for the sake of preserving agrobiodiversity is one of the main drivers to be a member of 'de Oerakker' according to eleven of the interviewees. For one of them that is so clear stating: *'Biodiversity is comprehensive. That is so obvious to me'*. When it comes to preserving agrobiodiversity members find it important to preserve a large gene pool for further generations. One of the members stated it like: *'I find it important to have genetic diversity as a base for breeding and in cases of natural disasters'*. Soil health and related to that the biodiversity within the soil is also of concern of some of the members (n=3). One of them is really caring and worrying about this: *'For years we have only focused on production and completely ignored soil health. This has led to plants that no longer stimulate soil life, but are therefore no longer stimulated by the soil. We should work towards regenerative agriculture. Agriculture that stimulates fungal networks. Making more use of old grain varieties. This will restore soil life'*. Contrary two members were saying that they do not care that much about the preservation of biodiversity. In one case someone even said: *'Everyone talks about biodiversity, but that doesn't really mean much to me'*.

### ***Preserving Dutch living cultural heritage***

Another main driver to participate within 'de Oerakker' and to care for the preservation of rare cultivars is the conservation of Dutch living cultural heritage. Members (n=6) find this important, because according to them historic cultivars have a museum function to show where we come from and to remain future generations be able to learn from the past. Furthermore, historic cultivars could be used to raise awareness about the way we produce our food today and the negative consequences that are paired with it. Someone put it like this: *'It's part of your culture. This allows you to continue to see the development in crops. And you can learn a lot from this development in agricultural crops. For example, you can see how mechanization has changed the entire vegetable cultivation'*. Moreover members are worrying about the potential loss of specific knowledge when many historic cultivars would be lost. Some members find it really strange that there is so little attention for the preservation of historic cultivars and are referring to how we care for lifeless Dutch cultural heritage, like our castles and monumental buildings, according to them we should care the same for our Dutch living cultural heritage. However on the other end of the spectrum there are also members that do not see the value of preserving Dutch living cultural heritage.

### ***Retaining control over our food supply***

Next to these two aforementioned motivations to be a member of 'de Oerakker', members (n=8) are also caring about the ever-worsening monopoly position of the world's leading plant breeding companies. Some members want to be able to breed cultivars themselves, so that they can decide for themselves what to breed for. According to some members the leading plant breeding companies are mainly focusing on the productivity and harvestability of cultivars and not so much on how cultivars taste and whether they are disease resistant. Members are afraid that the current focus of the leading plant breeding companies will result in a narrow genetic base for many cultivars and that the adaptability of those cultivars will thereby be reduced significantly. Linked to this are the worries of some members about the deterioration of the food supply in terms of tastes, functionalities and characteristics. One of the interviewees said: *'In recent years, much more has been focused on harvestability than on taste, for example. Taste has become neglected. Very different things are looked at'*. The focus on harvestability is a result of years of scaling up in agriculture, which is also a worry of some members, who want to strive for more local production and sale of food.

In addition to the aforementioned drivers out of worries about ecological and societal developments, some members do also have more personal drivers. For example, two members said that they really appreciate the type of people that are involved in 'de Oerakker'. Having these contacts through meetings of 'de Oerakker' was for them also an incentive to join the foundation.

## Views and practices of members on how 'de Oerakker' should be organized

### ***Creating a platform for historic cultivar seed multipliers and buyers***

The formation of a network of seed multipliers who are focusing on historic Dutch cultivars is for some members (n=10) the function of 'de Oerakker'. Seeds produced by this network could then be sold via a website that should be easily accessible for everyone that wants to grow plants of historic cultivars. Members named websites as 'Marktplaats.com' and 'Bol.com' as examples of how such a website should look like. Some are even arguing that 'de Oerakker' should design its own label under which it can sell its seeds. Others are suggesting to use the labels that are already launched by some of its members, like 'Vreeken's Zaden' or 'De Tuinen van Weldadigheid'.

Some members were arguing that for a role like this a close link between 'de Oerakker' and the Centre of Genetic Resource the Netherlands (CGN) is essential, which is contrary to the wish of the CGN itself that 'de Oerakker' should operate more autonomously. Multiple members (n=5) mentioned the complexity of propagating seeds of historic cultivars, and doubted whether this could be properly done by small scale businesses or amateurs. They argued to outsource the propagation of seeds to professional plant breeding companies in The Netherlands, such as Rijk Zwaan or Bejo Zaden. Thereby 'de Oerakker' could guarantee much better seed quality and health.

### ***Supporting the three existing networks***

Some respondents (n=7) would like to see 'de Oerakker' acting as an advocate for the three networks that are already present within 'de Oerakker', namely 'de Bekoring', 'Eeuwig Moes', and 'Nationaal Fruit Netwerk'. In such a role 'de Oerakker' should among other things facilitate meetings, carry out administrative tasks, connect the networks to all kinds of stakeholders, and apply for research grants or subsidy. Multiple members do see a major role for the individual networks for the future. According to them the networks are operating autonomously and should continue to do so. Especially, the 'Nationaal Fruit Netwerk' is mentioned multiple times as a successful network and as an example of how 'de Oerakker' should function. Active members of these networks would not like to see 'de Oerakker' to get more authority over the networks. Someone said: *'The three separate networks should continue to exist. The National Fruit Network is already functioning well. The Oerakker, as an umbrella organization, should provide direction and guidance.'* In addition, another interviewee said: *'You cannot impose all sorts of things on those networks. The networks must remain leading. They must maintain their autonomy.'*

### ***Realizing a visitor centre***

For some members (n=6) 'de Oerakker' should focus more on raising awareness among the general public about the current loss of agrobiodiversity instead of focusing on propagating seeds of rare cultivars. One of these members said: *'That initial goal of preserving historic*

*cultivars should not be the primary goal anymore. These old varieties do not have great intrinsic value. The goal should be much more to get people excited about the story of biodiversity conservation. That should be the first focus, not so much the production of seed from old Dutch varieties. However, it should not become an empty story, so you do have to propagate seeds from some historic varieties, so that you have a story to tell. And you have to create a hype around that story*. In some cases people were dreaming big and talked about a central location where they would like to open a museum or experience centre, called by some 'De Oerhof'. Someone else said: *'Ultimately it would be great if we could realize a museum 'De Oerakker'. A piece of land on which all those old varieties are grown and with a visitor centre, where you can also give cooking workshops, for example*'. At this place the general public could come to see the fields with historic cultivars, to participate in all kinds of workshops, to follow courses about the history of Dutch agriculture or functionalities of historic cultivars. According to some it could even include a party centre at which parties and weddings could be hosted. Some people were comparing it with the Dutch open air museum situated in Arnhem. There is not a clear idea of how this should be financed and realized. Respondents do see possibilities to get some grants from ministries or charity lotteries. They see it as the right time to apply for grants, because of the current public attention for the preservation of biodiversity. However, one member stated that although you might get some grants that would not solve the issue of having an operating deficit, which is the main bottleneck according to them. Many members mention the asking of a donor contribution from the members as a logical first step. Contrary, there are also members (n=2) who see this plan about a central educational and attractive visitor centre as not realistic. They are even thinking that this big dream can hinder the progress of the foundation if people will focus too much on this end goal. Other people are suggesting to not work towards a central educational and attractive location but to make use of members that are already undertaking these kinds of activities on their own grounds. Thereby 'de Oerakker' could realize in multiple regions of the Netherlands locations where people can be educated about Dutch historic cultivars.

## Discussion

### ***The role of professionalism in shaping the organization***

Talking with members about the functioning of the foundation revealed that many of them are thinking that the lack of professionalism and decisiveness within the foundation has been a main cause of the discontinuity and instability of 'de Oerakker'. Things that members mentioned as signs of this lack of professionalism and decisiveness were: unclear assignment and description of tasks and roles, poor internal and external communication, unequal distribution of the workload, and the lack of clearly defined projects and plans. It seems obvious that these separate things are interrelated to each other. For example, the unclear assignment of tasks led to the fact that minutes of meetings were not always prepared, approved and distributed among members which is also an example of poor internal communication. Likewise, little internal communication makes it harder to let people feel involved in the organization and thereby increases the chance that the workload will lay down on just a handful of people. It is known that consistent and meaningful communication is essential to give members, in this case

volunteers, the feeling that they are involved (Harrison et al., 2017). Feeling of involvement leads to stronger relationships between volunteer and the organization and makes it more likely that volunteers have the intention to continue with their work (Harrison et al., 2017). It is clear that at least for one moment members felt not involved in the process, because several of them dissociated then from the foundation out of frustration about the lack of progress and involvement. According to one of the members some apathy arose among these members at that point. Another indication of this apathy and frustration is that some members then tried to start an own initiative parallel to 'de Oerakker', which was called ProSpeciesRara NL, although in the end they did not proceed with it. Moreover, the fact that multiple members are mentioning that for most of the times the workload has been with one person or a handful of people shows that involvement of members has been low for most of the times. In addition the fact that the workload has been in most cases with just a handful of people, really made the success of 'de Oerakker' dependent on the capacities and available time of just a couple of people. For example, the business plan that has been prepared in 2017 and 2018 by just one member, which makes this business plan totally dependent on the views and insights of just one person. Furthermore, the fact that this business plan has still not been presented and communicated to the members is again a sign of poor internal communication.

### ***Internal communication and building bridges***

This poor internal communication could also be a clarification for the fact that members mentioned that the profession of seed propagating has been underestimated, while there should have been enough knowledge about this subject within the foundation if you look to the backgrounds of specific members. If the frequency of internal communication and involvement of members would have been high, specific knowledge about seed propagating could have been shared between and among members. However it seems that this has not been the case and so the foundation has not been able to benefit from the huge variety of backgrounds of members that is present, which is again a sign of low involvement of members. In fact this huge diversity in members is called as one of the causes of the poor functioning of 'de Oerakker', because according to some members it made it more difficult to come to a shared goal and philosophy. This is contrary to the fact that diversity is more likely to improve the success of organizations than to be a burden (Jayne & Dipboye, 2004). Moreover, this is contrary to the fact that by analyzing 'de Oerakker' as a boundary object this study found that that the motivations of members to become part of 'de Oerakker' and the way they think 'de Oerakker' should be organized are differing not too such an extent that they mean totally different things to members. Thereby this study shows that it is not likely that differing opinions about the purpose and structure of 'de Oerakker' among the members has been a reason for the discontinuity and instability of 'de Oerakker'. However, apparently having a shared goal and philosophy is not the only requirement for a foundation to be successful.

### ***Lack of essential professions***

While there was clearly, although not well exploited, a sufficient amount of knowledge about seed propagating etc. present within the foundation, this was definitely not the case for disciplines like public relations, marketing and organizational structures. This became clear

when members were asked about how to achieve the goals they were aiming for, like for example the realization of a visitor centre. In most cases members answered that they were lacking the profession and knowledge to say something meaningful about that and that they had no idea about how to set up or co-shape such a visitor centre for example. In addition, the fact that members mentioned that external communication has always been poor and that members were not having a business mindset are signs that this kind of expertise was not present within the foundation. Furthermore, the fact that a couple of members mentioned that there has always been a lack of budget is also exemplary for an organization that is missing members with a business mindset. Including people with a business mindset is pivotal for the success of CSBs, because the lack of financial resources is known as one of biggest obstacles for CSBs to become successful (DIVERSIFOOD, 2018).

### ***External factors***

The role of the CGN in the functioning of 'de Oerakker' is problematic. On the one hand the CGN has been a point of frustration among some of the members. These members were frustrated about the fact that the CGN did not use 'de Oerakker' as an instrument to fulfill their public function on the terrain of preserving Dutch historic cultivars, which was assigned to them by the ministry of Agriculture, Nature, and Food Security. It seems that on this point poor internal communication has led to different expectations among members, which in the end led to frustrations on both sides. On the other hand the CGN is responsible for one of the few successes of 'de Oerakker', namely the project called Orange list. This project was fully coordinated by people of the CGN and was carried out by two retired former employees of the CGN. The question is whether this success shows that the CGN should have had a more dominant and coordinating role or that it just shows that for a project to succeed it is important that the project is clearly defined and assigned.

Another explanation for the poor functioning of 'de Oerakker' could be the previous low level of public recognition for the importance of preserving biodiversity and more specifically agrobiodiversity. Multiple members mentioned that they have overestimated the public attention for preserving agrobiodiversity and that in the past the lack of attention for this subject has been a burden for the functioning and success of 'de Oerakker'. While the loss of biodiversity and agrobiodiversity has raised more attention in recent years, the question is whether this increase is meaningful, because the loss of agrobiodiversity has just accelerated (Pascual et al., 2021). In addition, according to member 21, the current attention for biodiversity should not be confused with attention for the preservation of historic rare cultivars, because those are two different things. According to him people are indeed more worried about the loss of biodiversity and are enthusiastic about locally produced food, but that does not necessarily mean that they also care about historic, rare cultivars. This is in line with the findings of Pascual et al (2021) who stated that biodiversity and thus agrobiodiversity can mean totally different things to different people and that initiatives that would like to counteract the loss of biodiversity should need to account for that.

# Conclusion

The explanations behind the discontinuity and instability of the Dutch CSB called 'de Oerakker' have been investigated in this study. Despite the fact that volunteers shared the ambition to contribute to the preservation of valuable Dutch heritage cultivars and had similar ideas about how to structure 'de Oerakker', the members have not been able to make 'de Oerakker' a success. According to the members the main cause for this has been the lack of professionalism and decisiveness within the foundation. Signs of this lack of professionalism are unclear assignment and description of tasks and roles, poor internal and external communication, unequal distribution of the workload, and the lack of clearly defined projects and plans. Poor internal communication has led to low involvement of members and to the fact that the potential benefit of the wide diversity of members has never been fully exploited. Moreover, the lack within the foundation of essential professions to build up a successful organization, like public relations and marketing, have hampered the success of the foundation. The CGN played an important role in the functioning of 'de Oerakker' during the last two decades. In the perception of the members it contributed both negatively and positively to the functioning of 'de Oerakker'. It seems that different expectations about the role that the CGN should play towards 'de Oerakker' has led to frustrations on both sides, which is again a negative effect of poor internal communication.

The lesson from this study for CBSs as citizen initiative for preserving heritage seeds is that the degree of professionalism can really determine the success of the organization. Having a huge passion for the topic is not enough for a CSB to be successful. Clearly defining the roles and tasks within the organization, but also the roles of different partners towards the CSB is pivotal. Internal communication is important for CSBs to build bridges between members of different disciplines and to manage the expectations of the different members. CSBs should not only include people with a background in or passion for agriculture and plant breeding, but also people with experience in fields like public relations and marketing. Furthermore, CSBs should not count too much on the current public attention for themes as biodiversity. Biodiversity can mean a lot of things to different people, and so the current attention for biodiversity not automatically means that there is also attention for the preservation of rare, historic cultivars. CSBs should account for this, especially when they want to appeal to a wide audience.

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## Annex 1. Ordering of information from the interviewees.

	Reflections of members on the functioning of 'de Oerakker'										Members' incentives or motives to participate within 'de Oerakker'				Views and practices of members on how 'de Oerakker' should be			
	Lack of professionalism and decisiveness					Wrong place and time					Project Orange list has been a success	Preserving agrobiodiversity	Preserving Dutch living cultural heritage	Retaining control over our food supply	Getting in contact with nice people	Creating a platform for historic cultivar seed multipliers and buyers	Supporting the three existing networks	Realizing a visitor centre
Roles not strictly assigned and no clear description of tasks	Workload was always with a handful of people	Poor external communication	Poor internal communication	Lack of decisiveness and concrete plans	Lack of a business mindset	Underestimation of the profession	Wrong place	Wrong time	Lack of cohesion between members									
<b>Present board members</b>																		
A												x						x
B				x	x												x	x
C																	x	x
<b>Advisers current board</b>																		
D		x	x		x							x	x				x	x
F			x		x					x		x					x	x
<b>Former board members</b>																		
G		x	x		x	x				x								
H				x						x								
I										x								
J	x	x			x							x					x	
K	x	x								x		x						
L		x		x						x	x	x					x	
<b>Members</b>																		
M			x		x	x						x					x	
N	x				x						x						x	x
O		x			x	x						x					x	
P		x	x	x	x						x						x	x
Q		x															x	
R		x															x	x
S		x			x							x	x				x	
<b>CGN employees</b>																		
T					x							x					x	x
U	x	x		x	x							x					x	x