



**DYNIVERSITY**

# **Nordic Heritage Cereal Conference (Nordic countries)**

**Case study analysis**

**DYNAmic seed networks for managing European diversity:  
conserving diversity *in situ* in agriculture and in the food chain**



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# PART 1: DESCRIPTION

## 1.1 Contextualising the case

The Nordic Heritage Cereal Conference (NHCC) was initiated in 2009 by Hans Larsson, a Swedish organic cereal breeder who had established a collection of promising heritage cereals, and Allkorn, the association of farmers and users created around that collection and involved in participatory breeding. That year, a seminar was held among stakeholders from Nordic countries (Denmark, Finland, Norway and Sweden) was held who were developing heritage cereals in their country based on Larsson's collection or were interested in doing so. This first seminar in Sweden received some funding via a project on Nordic food funded by the framework of Nordic cooperation.

Since then, the seminar was held on an annual basis, with variable funding from one year to the next. In 2015, the event was hosted by the Gullimunn mill in Norway as an open Congress and an occasion to raise awareness for cereal diversity and artisanal sourdough baking among authorities and consumers. In 2019, the NHCC was organised as a joint event with the European Coordination for "Let's Liberate Diversity" and the European CERERE project as the "European Diversity Cereal Festival".

This case study is based on the observant participation of the 2018 edition, and an interview with the initiator of the first seminar. The 2018 was attended by participants from Denmark, Estonia, Finland, Norway, Sweden, and Scotland, but also 5 participants from Italy, Spain and Belgium.

## 1.2 « Doing »

### 1.2.1 Properties WITHIN the initiative (closure)

The collection around which the NHCC network emerged was established by Hans Larsson and Allkorn in the framework of a participatory organic cereal breeding program at the Swedish University of Agricultural Sciences, in a context where no other formal organic cereal breeding program North of Denmark existed. Landraces and varieties from this collection were disseminated throughout the Nordic countries, and in parallel actors in each country also began searching for heritage cereals on farms and in genebanks.

The network of stakeholders around the NHCC shares many varieties that are grown throughout the Nordic countries. The event is used by several participants for the sharing and exchanging of seed of varieties they value. Some varieties have also been spread to the frontiers of what is usually understood as the region of the Nordic countries, as one Scottish participant at the 2018 NHCC spoke of his positive experience with the varieties he had received from Swedish and Norwegian networks.

Despite this interest in crop diversity within the Nordic network, the initiator now observes and regrets the overwhelming success of Oland-wheat, a heritage variety with exceptional taste and baking quality, at the expense of diversity. He would like to favour evolutionary varieties (i.e. variety mixes or crosses which evolve as a population from one plant generation to the next) as a way to maintain crop diversity and favour local adaptation.

### 1.2.2 Properties BEYOND the initiative (outreach)

The conference has up to now been a rather informal gathering. Although it appears that a core group of actors meet every year, there is no formal boundary to the network, i.e. anyone can sign up and participate. The 2018 edition was mainly attended by farmers, millers and bakers, although few farmers were present due to an unusually early cereal harvest. However, the participation also goes beyond these target groups, attracting participants such as one journalist from the "Bread" magazine and an artist interested in crop plants as an intersection between nature and culture.

In the 2018 edition, one of the main topics discussed was how to develop and structure a collaboration with genebanks. For example, one researcher from Finland, coordinating seed multiplication in a network of Finnish farmers, experiences that the Nordic genebank NordGen shares and distributes accessions willingly, but worries that with increasing interest for heritage cereals NordGen could become inclined to refuse requests if they become too numerous or uncoordinated. She therefore gathers accession requests from farmers, centralises the request to the genebank, distributes the samples and keeps track of multiplication to avoid duplicated requests. As the organiser and coordinator of the 2018 edition, she feels Nordic countries are too small and too scarcely populated to build "community seed banks" (as they exist in Spain for example) with more than two members, which might explain the openness to working with Nordgen. Another explanation according to the 2018 organiser is that farmers in Nordic countries had lost heritage varieties in their possession, and therefore had to rely completely on genebank accessions to start discovering

and exploring them.

On the other hand, a NordGen representative spoke of the willingness of the genebank to provide larger seed batches, e.g. of 20-30 kg, if there are stakeholders within the network interested in multiplying them. This aspect was further discussed during a workshop on the collaboration between NordGen and stakeholders, facilitated by a NordGen representative. He also spoke of NordGen's availability to help describing varieties to allow for their registration as conservation varieties, and thus for further seed production.

For the marketing of grain and seed, the challenges posed by legal frameworks need to be addressed in each country, but the Nordic Heritage Cereal Conference is a place to share experiences and get inspired from others, either through the formal conference talks, or through informal exchanges. For example, one independent advisor for organic farming from Finland, interested in heritage cereals, discussed the limitations in seed package size that were applied in order to allow selling cereals of conservation varieties. He encouraged participants to discuss about how one could argue for this limit to be high enough to enable farmers to sow at least 1 or 2 hectares when they want to grow a conservation variety.

As another example of legal niches created in individual countries, one Norwegian farmer who manages a mill and cereal collection with another farmer, explained how he was authorised to sell seed of heritage cereals, exclusively, and that seed under this particular framework was controlled for purity and germination rate only, as opposed to certified seed. If a seed batch did not conform with purity and germination requirements, he could still offer it as seed to a farmer in a closed circuit, i.e. if that farmer sold the grain produced from that seed batch back to the mill.

### 1.2.3 Transformative effects BEYOND the initiative

The conference is a central place for the exchange of knowledge and experience among actors of the heritage cereals in the Nordic countries, from growing the cereals to milling and baking them, including technical and economical aspects. The exchange is achieved through plenary conference sessions, workshops in subgroups, and visits to farms and demonstration plots. Beyond these technical exchanges, community is built through this annual get together, in particular through recreational activities in the program, e.g. a pancake and sauna night at the 2018 conference.

## 1.3 « Organising »

### 1.3.1 Properties WITHIN the initiative (closure)

The organisation of the annual conference rotates among organisations and initiatives involved in the breeding, growing, milling, baking or otherwise processing (into crackers, pasta) of Nordic heritage cereals. It is conceived as an annual get-together, that doesn't involve collective interaction between participants throughout the year in-between the conferences, except for bilateral interactions for seed exchange, commercial relations or information sharing or projects that may involve several participants.

The informal structure of the network around the NHCC seemed to be an issue at the 2018 edition, as a working group on the continuation of the Nordic network came up with the recommendation that each participating country should create an association or join an existing one to build a more formal network.

Language is usually a mix of Swedish, which is spoken and understood by most Nordic participants with the exception of some Finns, and English. The websites and invitations of previous conferences were in Nordic languages, but the 2018 edition had an English website and invitation, perhaps because it was held in Finland.

### 1.3.2 Properties BEYOND the initiative (outreach)

In 2018, a group of five non-Nordic participants attended the conference, representing the European Coordination "Let's Liberate Diversity" (EC-LLD) and the European project DYNAVERSITY, both interested in getting to know and connecting with the Nordic network. On this occasion, some participants expressed their interest in strengthening connections between the Nordic network and broader European networks, ECLLD in particular, although some exchanges existed previously, e.g. through the participation of a Danish cereal breeder in European projects or the legal advice from Austrian non-profit Arche Noah. As a result, the 2019 edition of the conference was organised as a joint event with the European Forum "Let's Cultivate Diversity" (driven by the EC-LLD) and the final conference of the European project "CEreal REnaissance in Rural Europe" (CERERE) was held in Denmark. Also, a working group on how to structure the continuation of the NHCC recommended that the Nordic network join the ECLLD.

### 1.3.3 Transformative effects beyond the initiative

The motivation to favour local economies around heritage cereals and artisanal sourdough baking was mentioned several times during the 2018 conference. This expresses a willingness among participants not to grow excessively (although some growth is necessary in some cases to make an activity viable), but to be “proof of concept” for other small companies or farmers to develop similar models. One participant from Scotland presented the flour mill model he is using as an illustrative example of the non-scalability of his activity and the need for other, similar mills to be set up: the mill, designed to produce high-quality flour without heating the grain, can crush 20 kg of grain / hour and cannot be up-scaled without dramatically increasing the power of the motor, hence the heating of the grain.

## **PART 2: ANALYSIS**

### **2.1 Knowing**

#### 2.1.1 Properties WITHIN the initiative (closure)

Among participants of the 2018 conference, nutritious, tasty bread and heritage cereals were seen as an opportunity to build local economies (mills and bakeries sourcing fresh grain from local farms) and/or to reconnect with traditional knowledge and know-how (e.g. Sangaste rye and its cultural heritage, or traditional Kama-making in Estonia). It seems that building locally based companies is facilitated in Norway by “Innovation Norway”, a national funding source mentioned by several young Norwegian entrepreneurs at the conference.

Knowledge around heritage cereals and their multiplication is created both on farms and in bakeries. For example, a Finnish farmer held a talk on the necessary technical equipment for the different stages of on-farm cereal multiplication from small amounts of seed. Another example is the farmer-owned mill Gullimunn Urkorn in Norway, which was created by a farmer who had to develop her own value chain for heritage cereals because conventional mills considered her grain unfit for milling and baking. She organises baking courses on how to bake with the flour made by the Gullimunn Urkorn mill. Bakers involved in the courses engaged in the development of an artisanal recipe to be able to bake even from flours with a falling number too low to allow for conventional bread making. The overall objective was to be able to process flour and support the mill even in “bad years”, and to be able to develop alternative uses for flours which were not apt for bread making, rather than using them as animal feed. Several months of research and development resulted in recipes for waffles and crispy cracker-type snacks.

#### 2.1.2 Properties BEYOND the initiative (outreach)

The NHCC is a get-together to share and develop knowledge among Nordic actors already involved with heritage cereals in one way or another. It is up to the participants to then use and operationalise this knowledge in their own countries and contexts.

According to the experience reported by some participants, it seems that in Nordic countries in general, the activities around heritage cereals and the associated knowledge are not strongly contested, perhaps because cereal production and cereal breeding are not activities of major economic importance, except perhaps for Denmark.

#### 2.1.3 Transformative effects beyond the initiative

Firstly, the activities and knowledge around Nordic heritage cereals challenge conventional, large scale cereal production and the food industry in the way food quality, and in particular flour and bread quality are understood. Indeed, the right of consumers to have access to nutritious, wholesome bread and other cereal products (porridge, pasta, etc...) was mentioned by several participants, either in formal talks or in informal exchanges. Secondly, the conference's themes challenge the way economies are designed, by redirecting the focus from a globalised food industry to more local, community-based economies.

### **2.2 Framing**

#### 2.2.1 Properties WITHIN the initiative (closure)

The work in the Nordic network is initially framed as an endeavour for crop diversity. For the initiator of the Swedish cereal collection from which the NHCC and the Nordic network emerged, producing an alternative to seed laws which were increasingly restrictive on crop diversity was an important motivation. Crop diversity is also mentioned as a

central motivation in the invitation published on the website of ECLLD. Although crop diversity remains a central issue, nutrition and food quality seemed to have become the main concern shared by the participants at the 2018 conference. However, this may also be explained by the bias in participants, due to the earlier mentioned cancellation of many farmers because of unexpectedly early harvests that year.

Participants mainly discussed heritage cereals, i.e. historical varieties and landraces. However, some participants and discussions also mentioned evolutionary varieties and their role and potential in cereal production.

### 2.2.2 Transformative effects beyond the initiative

The outcomes of a workshop among millers and bakers (the “bread group”) at the 2018 conference were illustrative of how the approach and activities of the Nordic network reframe cereals and the work with cereals. Beyond the usual quality criteria for baking enforced by most mills, as the falling number for example, handcraft baking connects people through a shared passion and values. In their opinion, hearing a passionate baker speak of flour made from organic heritage cereals regardless of its falling number may help farmers regain interest and pride in their activity and produce. Also, distributing handcraft bread from heritage cereals is regarded as a way to value crop diversity.

As another participant put it during his talk: “If you start to think about diversity as a central point, a mantra, things click together”, explaining that taking diversity as a point of departure leads to a new way of framing the production of crops, milling and baking, food quality and economical circuits.

## 2.3 Networking

Firstly, shared common knowledge of the peculiarities of the northern geographical area and shared climatic constraints are one foundation of this ongoing Nordic network. For example, participants from Nordic countries all can relate to the cultural importance of rye and rye bread. Shared climatic constraints also explain that many of the participating countries cultivate common varieties, many of them originally coming from Hans Larsson’s organic breeding and variety evaluation programmes.

Secondly, providing quality food products, bread in particular, to consumers is a concern that participants to the NHCC share. This binds them and drives them to engage actors from the entire food system from field to fork to reach this goal.

Lastly, sourdough and handcraft sourdough baking has been identified as a bridge in multiple aspects. Firstly, as a way for bakers to produce quality bread for consumers. According to one participant, home-baking with sourdough, especially of rye, remains an important activity for many people in Nordic countries, so sourdough is something a larger public, beyond bakers, can relate with. Also, handcraft sourdough baking is often the only way to make bread from organic heritage grains, which seldom have the properties for industrial baking. As described by a participant to the 2018 conference, who was questioned about the role of sourdough as a connection between the conference participants, a baker cultivates sourdough as a farmer cultivates a field of heritage cereals, and this may facilitate mutual understanding. As another participant puts it “cereals stand between the soil and sourdough”, wondering why (microbial) diversity is increasingly valued in “our soils, in our sourdough and in our guts”, but few people feel concerned about diversity in cereal fields and in the economic structures producing and distributing food.

## **PART 3: SUMMARY**

As an informal Nordic network engaged with heritage cereals from “soil to slice”, participants to the NHCC have seized the need to re-think the way the quality of bread-making cereals is defined, and the way economic cycles are designed. In this respect, the exchange of knowledge among participants favours “horizontal proliferation” through the multiplication of local, community-based economies connected through a network, rather than up-scaling successful enterprises by increasing their size and geographical coverage.

At the 2018 conference, the participation of actors from Western and Southern European countries, made it clear that there are different ways to relate to and motivate work with crop diversity. Whereas farmers’ rights to manage, select and produce their own seed is a central argument in more Southern countries, consumers’ rights to nutritious,

wholesome foodstuffs was more strongly emphasized within the Nordic network. Of course, these motivations and arguments are in no way exclusive of each other and are likely all embraced by the different actors. Our hypothesis is that embracing different types of motivations for crop diversity, and perhaps interconnecting them, will be useful in view of building a wider European network for crop diversity.