

CERERE

CEreal REnaissance in Rural Europe: embedding diversity in organic and low-input food systems

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Collected solutions

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- CO:** Confidential, only for members of the consortium (including the Commission Services)
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Abstract

The overall aim of the CERERE project is to promote and enhance innovation in diversity-based cereal food systems in European agriculture by facilitating the connection and exchange of knowledge between all value chain actors and between value chain actors and the world of research.

This deliverable contributes to this aim by presenting six collected solutions that help bring about a cereal renaissance by widening the range of alternatives to commodity cereals in European food and farming systems. The collected solutions have been developed based on the experience of 33 European initiatives that are described as CERERE case studies and two scientific papers reviewing literature in a participatory approach. The six collected solutions refer to the use of ancient cultivars and of populations of cereals, traditional recipes and processing methods with alternative cereals, working with consumers as partners in the cereal renaissance, supporting networking and collaboration with others in the industry, collaboration with research in multi-actor projects and operational groups, and using organic farming and quality assurance schemes. Each solution has been presented in the format of a CERERE practice abstract stating the problem, the solution, the likely outcomes, practical recommendations and source of further information.

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List of abbreviations

AFN	Alternative Food Networks
CERERE	CEreal REnaissance in Rural Europe: embedding diversity in organic and low-input food systems
CETAB	Research Center and Land for the Promotion of Wheat Cultivation
DG AGRI	Directorate General (EU Commission) for Agriculture and Rural Development
FOPA	Finnish Organic Farmers Alliance
GAC	Grupo de Acción Compartida
EIP AGRI	European Innovation Partnership Agriculture
EU	European Union
PA	Practice Abstract
PGS	Participatory Guarantee Systems
PDO	Protected designation of origin
PGI	Protected geographical indication
TSG	Traditional Specialty Guaranteed
UK	United Kingdom of Great Britain and Northern Ireland
WP	Work Package

1 Introduction

The overall aim of the CERERE project is to promote and enhance innovation in diversity-based cereal food systems in European agriculture by facilitating the connection and exchange of knowledge between all value chain actors and between value chain actors and the world of research. The work on knowledge synthesis (WP2) aims to identify and synthesize good practices and research results that are relevant for building innovative, diversity based and quality- and health-centred cereal food systems.

The CERERE team has mapped and identified cereal-based initiatives aimed to enhance diversity throughout Europe. Case studies were characterized according to contextual and environmental conditions in which these bottom-up processes occurred, the traditional practices that were further developed, or reintroduced, and the actors and institutions involved in developing these diversified and sustainable food systems. This supports the learning about and sharing of solutions that arise from the case studies and identifying the conditions under which given practices could be transferable.

The CERERE team has also reviewed scientific literature of diverse cereal-based food systems, using a unique participatory review approach (Sacchi et al., 2018; Sofi et al., 2018).

This report presents some further analysis of these case studies and research results of the CERERE network with the aim to identify innovative solutions that arise from the bringing together of research findings results and practical experiences.

These collected solutions demonstrate the potential of farmer-led research, of close collaboration between researchers and farmers and thus encourage a more integrated approach to innovation in cereal food systems. The collected solutions have been written in a language accessible to practitioners in the form of practice abstracts, facilitating the more immediate application of research results through the dissemination and sharing efforts of WP3, WP4 and WP5.

2 The experience collected through the case studies

2.1 Identification and characterization of cereal-based initiatives

In CERERE, case studies are used to highlight and communicate European experiences with bottom-up innovation along the farm-to-fork continuum that are focusing on diversified and sustainable cereal food systems. A total of 39 case studies were identified and briefly described (see Riviere, 2017). Of those, more detailed descriptions were available in English for 33 case studies, a list of which is provided in Table 1. The individual reports from the case studies are not published yet, but a booklet will present a selection.

Location: The initiatives were located in seven European countries: 8 in Italy, 7 in France, 6 each in Spain and the in the UK, and 2 each in Ireland, Hungary and Finland.

Farming system: Most case studies (28) were focused on cereal production in organic farming, one initiative dealt with both organic and conventional producers, one describes itself as low-input and one as integrated farming.

Cereal species: Most case studies work with production and processing of soft wheat (17/33), followed by durum wheat (4 cases). Other initiatives work mainly with spelt (2), triticale (1), rivet wheat (1), oats (1) and buckwheat (1). Five initiatives use several cereals, including wheat, barley, rye, emmer, einkorn, spelt and rivet. In one case study the cereals grown were not specified.

Table 1: List of case studies available for analysis

Case study	Country	Main cereal	Farming system
ORC Wakelyns Wheat Populations	UK	Wheat	organic
Sharpham park spelt	UK	spelt	organic
Scotland the Bread Community Benefit Society	UK	wheat	organic
Organic Arable Marketing Company	UK	various	organic
Linking Environment and Farming (LEAF)	UK	unspecified	integrated
Torth y Tir Ltd	UK	wheat	organic
Pane Montespertoli	IT	wheat	organic
Caselle in Pittari Companatico	IT	wheat	organic
Grani Resistenti	IT	wheat	organic
Spiga e Madia	IT	wheat	organic
Forno Brisa	IT	wheat	organic & conventional
Domus Amigas	IT	wheat	organic
Solina	IT	wheat	organic & conventional
Terra e cielo	IT	durum	organic
Grupo de Acción Compartida (GAC)	ES	various	organic
Alonzo Navarro's varieties	ES	wheat	organic
Spiga Negra pasta	ES	durum	organic
Artisanal Bakery La Artesa	ES	wheat	organic
Pan para todos y más	ES	durum	organic
Culturhaza: spelt production and art	ES	spelt	organic
Sheridan's Brown Bread Crackers	IE	wheat	organic
Kilbeggan Organic Foods	IE	oat	organic
Biomalom Ltd	HU	triticale	organic
Agrohungária Kft	HU	wheat	low-input
FOPA (Finnish Organic Farmers Alliance)	FI	buckwheat	organic
Finnish Landrace Association	FI	various	organic
CETAB (Research Center and Land for the Promotion of Wheat Cultivation)	FR	various	organic
Triptolème	FR	wheat	organic
GABB Anjou (Group Anjou of Organic and Biodynamic Farmers)	FR	wheat	organic
Odyssée de l'Engrain	FR	rivet	organic
Durum Wheat Project	FR	durum	organic
Flor de Peira – BioCivam 11	FR	wheat	organic
Let's Cultivate Biodiversity in Poitou-Charente	FR	various	organic

Source: Case study reports

2.2 Aims of the studied cereal initiatives

Nearly all initiatives studied by CERERE as case studies aim to diversify the cereals grown on the participating farms. Cereal diversification was one of the selection criteria for inclusion as a case study. In many cases, this refers to, or includes, the preservation of

local or regional ancient cultivars and underutilised cereal species. Some initiatives are also engaging with cultivating legumes and one focusses on buckwheat.

Common in the aims of the initiatives is also reference to the selection and breeding of cultivars adapted to local, organic or low-input conditions. This is accompanied by a move away from focusing only on ancient cereals towards newly bred lines or populations that are selected with involvement of the farmers or are considered particularly suitable for organic production and have good nutritional qualities.

Other aims that several of the initiatives have in common include:

- Regional and community-based bread-making (e.g. Torth-y-Tir, Spiga e Madia, Pan para todos y más, Scotland the Bread)
- The revival of local traditions to produce bread from local cultivars, often combined with traditional and artisanal baking and promoting local consumption (e.g. sourdough, woodfired bread ovens) (e.g. La Artesa, Montespertoli)
- Use of marginal land for cereal production (Terra e Cielo, Grani Resistenti)
- Improved access specialist and niche markets (e.g. organic, spelt, oat products etc) (Sharpham Park, Organic arable, Terra e Cielo).

There are also some other aims that are mentioned by individual case studies that might be of interest to others engaging in the cereal renaissance. These include:

- Strengthening of rural development including one initiative led by women (Domus Amigas)
- Complementing existing products, such as wholemeal crackers to complement cheese (Sheridan)
- Involving artists with the production of grain and bread (Culturhaza).

We also characterized the aims and description of the case studies according to the three pillars of sustainability, whereby reference to genetic diversity was also characterized under environmental sustainability. Most initiatives refer to social sustainability (25/33), followed by environmental (17) and economic sustainability (12). In many cases more than one pillar of sustainability was referred to in the aims, which explains while the numbers come to more than the total of 33 case studies.

2.3 Products developed

Ten of the 33 Initiatives mention that an important activity of the group is to exchange or sell seeds between the farmers taking part, often referring to local and adapted cultivars. Some of these initiatives (for example the Finnish Landrace Association or the Spanish

Grupo de Accion Compartida) do not engage with the processing of grains to food products at all and can best be characterised as farmer-led or community seed networks.

However, most initiatives also engage with food production and food products developed by the initiatives studied include the following:

- Bread from ancient or newly bread wheat cultivars (10 initiatives)
- Flours from traditional milling and/or from ancient cultivars (13 initiatives)
- Pasta (dry and fresh) (6 initiatives)
- Other grain products, such as pearled spelt, porridge oats, coarse buckwheat flour (5 initiatives)
- Other baked goods such as focaccia, pizza (2 initiatives)
- Cheese crackers and biscuits (2 initiatives).

Not included were initiatives engaging with other oat-based products, such as müsli or other breakfast cereals or oat-based drinks (e.g. oat milk)

Most initiatives sell these food products at local markets (26/33), eleven cases sell at a national scale and two also sell internationally. Four initiatives use more than one target market.

2.4 Structure of the initiatives and actors involved

The information collected shows some diversity in the structure of the initiatives. All case studies directly involve farmers, many also engage with processors (mainly bakers, millers and pasta makers), with researchers and facilitators, consumers, local authorities.

Origin of the initiatives

The engagement of these initiatives with diverse cereals originated in many cases from private businesses (13/33), such as farmers or bakers and millers alone or in collaboration. Similarly, ten projects represent informal producer groups that are also often collaborating with other actors. Only three cases represent formally established organic producer groups (2) or cooperatives (1). A smaller number were characterized as community-led initiatives or community bakers (3 cases) and two can be characterised mainly as seed networks. One charity certifying producers to the rules of integrated production and research organizations that has developed a wheat population were also studied.

Collaboration and networking

Most cases referred to wider networks and collaboration including with local authorities, research organizations, bakers, retailers, processors, consumers and with researchers.

The building of links with industry and related sectors is also common. For example, Sheridan's (Ireland) works with traditional millers and with national certification schemes in the development of oat-based cheese crackers. Such actors can help identifying barriers to supply chain development and facilitating collaboration between actors to better 'integrate' the supply chain for more sustainable markets in the long term. This includes addressing practical or logistic issues in processing or distributing cereals, which requires specialist knowledge about markets and cereals and marketing products.

Facilitators can help creating networking spaces for linking farmers with advisors, researchers, breeders and retail. Examples include matching areas of interest and opportunity for added value in the market place to priorities for cereal breeding such as in Hungary, or crackers in Ireland; e.g. LEAF's development of practical tools for on-farm self-monitoring of sustainability, and logo to provide a marketable outcome of this.

Some initiatives have aimed to establish new models of interaction, for example Grani Resistenti (Italy) is developing pre-finance models in network, La Artesa (Spain) is emphasizing the 'fair and sustainable' ethos of the initiative through their sales channels. Some are running the initiative as a social cooperative and are trying to develop alternative economic models to facilitate the development of cereal supply chains.

Collaboration with researchers

Many initiatives have direct links and intensive collaboration with researchers and in some cases research projects have been the main sources of funding to begin with (e.g. ORC Wakelyns population in UK, CETAB in France, Agrohungaria in Hungary). They are supporting the multi-actor and farmer-led approach mainly in relation to breeding, but also to a lesser extent in looking into agronomy, product and processing qualities, as well as input of new research, involvement in trials, access to genetic resources and expertise on varieties/breeding. Important for many projects is also access to funding and to findings from related projects elsewhere. Many initiatives are actively facilitating two-way knowledge exchange, which includes feedback of the experience of practitioners to researchers. The researchers, in turn can be engaged as problem solvers in multi-actor research projects, help to address questions raised by farmers and other actors.

Not many initiatives reported the engagement of marketing specialists or economists as researchers in their projects, although market access and financial issues appear to be common problems.

Use of organic and other certification schemes

Most CERERE case studies (28 of 33) are producing cereals in organic farming, one initiative dealt with both organic and conventional producers, one refers to itself as low-input and one as integrated farming.

Some emphasise the importance of working with national certifiers or established schemes (e.g. Sheridan's in Ireland).

Several are aiming to or have developed alternative and often participatory guarantee schemes (PGS) with their own standards. They emphasise mutual learning and co-creating of knowledge as of particular value in PGS schemes. For example, Flor de Piera (France) has developed a PGS in support of its brand development and Montespertoli has implemented PGS for producers jointly with the municipality.

Engagement with communities, policy makers and government

Several initiatives aim to promote local cereal diversification through an education and direct involvement approach and are engaged with educational activities (e.g. Spiga Negra in Spain). They aim to build awareness and understanding, which will provide a basis for market and project development in the long-term, and also increase their social and potentially also economic sustainability. Some initiatives (e.g. Solina in Italy, GAC in Spain) develop links with national and regional parks for agritourism and catering outlets, referring mainly to the quality attributes of the grains, whereas others (such as Grani Resistenti) make use of the regional and social identity of the cereals. One project (Culturhaza Spain) works with local artists, aiming to use art as an instrument of expression and communication to explain agriculture.

Involving policy makers in knowledge exchange and informing them of issues on farm and in the supply-chain can contribute to gaining a better understanding of what is and isn't working and prepare to adapt future policies.

2.5 Conclusions

The case studies are drawn mainly from organic and low input cereal systems and originate from private businesses including farmers, millers and bakers which evolve into broader networks and collaboration. Practices dealing with innovative ways of including alternative cereals at the farm-level and in supply chain initiatives include the following:

- use and further development of ancient and adapted cultivars and heterogenous populations,
- exchange or sell seeds between the farmers taking part,

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- process these diverse raw materials using traditional recipes and processing methods, e.g. traditional bread with sourdough,
 - develop new products from ancient grains, including different bread, flours and pasta, other baked goods, crackers, pearled grains, porridge oats and coarse buckwheat,
 - develop local markets through direct selling or community-based initiatives,
 - develop national or international markets mainly through collaboration with existing processors and retailers,
 - build their own or collaborate with wider networks, often including links with research and the use of project-based funding for multi-actor research or rural development projects,
 - use organic certification, quality assurance schemes or participatory guarantee systems.

As such, and in line with the aims of the project the selection of case studies was focused on a specific bottom-up model involving farmers for the cereal renaissance and other opportunities, with less focus on other initiatives originating from processors or consumers identifying a niche in national and international markets that might allow more producers to engage in the cereal renaissance.

The strong emphasis on social and environmental sustainability may have prevented initiatives from recognizing that benefits of diversity that potentially also apply to reducing financial risk, to the diversity of routes to market, and to a diverse customer base (including those that live in cities and shop in supermarkets).

3 Key findings from the literature reviews

The purpose of the literature in CERERE was to review recent research on alternative cereal systems within the fields of quality and health attributes and of rural development. The reviews followed a participatory approach that involved academics as well as practitioners from the CERRERE project with complementary types of knowledge. The consortium partners selected studies that they perceived as most relevant to facilitate transition towards more sustainable and diversity based cereal systems and food chains - in a practical way.

3.1 Conclusions regarding quality and health attributes

The following conclusions are based on the review of 'Health and Nutrition Studies Related to Cereal Biodiversity' of presented by Sofi et al (2018).

- Whole and ancient grains are increasingly recognized for the nutrients they provide and the complex role they play in promoting health.
- The macro- and micronutrients along with the phytonutrients present in their whole seeds seem to synergistically contribute to reduce the risk of several chronic diseases such as cardiovascular disease, diabetes, obesity and certain cancers.
- In the review ancient and whole grains were analysed together, and both can have similar health promoting effects, but there is likely to also be considerable variability in results.
- Apart from the nutritional content of the grain itself; health outcomes are also likely to be influenced by diet and by processing.
- The results from intervention studies show a mixed picture with only some studies showing a beneficial effect for the consumption of whole or ancient grains. However, none of the studies reviewed had shown negative impacts on the health outcomes tested.
- A proportion of the population might benefit from eating more whole and ancient grains, but given strict rules for health related advertising, the generic research evidence may not be sufficient to substantiate for health-related claims for all initiatives ongoing.

3.2 Conclusions regarding rural development

The following conclusions are based on the review of 'Alternative and Sustainable Food Systems for the Promotion of Cereal Biodiversity' presented by Sacchi et al (2018).

- Sustainable transition is facilitated by an active involvement of societies, communities and institutions.
- Besides the utilitarian reason for purchasing healthy food, consumers are also motivated by strong concern for the environment, and by buying locally-grown food, in an attempt to reach a better control of their food choices.
- Positive issues of Alternative Food Networks (AFN) highlight the connectedness and embeddedness of producers and consumers, a new narrative of food sovereignty opposing mainstream industrialized food provision, the role of engagement of civil society to civic agriculture movement translating towards political and social activism, the potential of differentiation strategies and market recognition for organic products, opportunities arising from the use of Participatory Guarantee Systems and from special proximity and local food networks.
- Negative issues include mainly the danger of 'romanticizing' the alternative and to make it as a barren slogan, the perceived conventionalisation of many organic supply chains, price of organic certification.
- Constraints arise in accessing alternative food products for consumers and the difficulties of producers to engage in AFNs.

4 Summary of collected solutions

The results the case studies and the literature reviews from CERERE have been used to derive six collected solutions that demonstrate the potential of farmer-led research, of close collaboration between researchers and farmers and thus encourage a more integrated approaches to innovation in cereal food systems. The solutions have been summarised and are shown here in the form of EIP practice abstracts format.

4.1 Using of ancient cultivars and heterogenous populations

Problem	The performance of modern cereal varieties under the conditions of organic and low-input farming and on marginal land is variable.
Solution	Ancient cultivars and species and heterogenous farmer populations can represent an alternative to modern cereal varieties and increase access to and use of genetic diversity.
Outcomes	Initiatives growing ancient cereals use them both to develop food products and to further develop more locally adapted cultivars. Ancient and whole grains are increasingly recognized for the nutrients they provide and can contribute to reducing the risk of some chronic diseases.
Practical Recommendation	<p>Ancient and whole grains can be used to produce breads, pasta, baked goods and other novel products.</p> <p>One important activity of groups working in ancient cereals is to exchange seeds between the farmer members, alongside developing food products. Seed quality and safety using appropriate methods must be ensured to avoid problems with seed-borne diseases.</p> <p>Many initiatives also refer to the better adaptation of such cultivars to organic or low-input farming and to local conditions. But there is a need to experiment with the performance of cultivars and species under the local soil and climatic conditions to reduce the risks of poor performance.</p> <p>Given strict rules on advertising claims, the generic research evidence with variable results from intervention studies may not be enough to substantiate health-related claims for any food products.</p>
Further Information	<p>CERERE Practice Abstracts:</p> <ul style="list-style-type: none">#1 Preventive Measures Aimed at Controlling of Spread of <i>Tilletia Caries</i> in Organic Cereals#6 Crop Management for Underutilised and Minor Grains#7 Growing Organic Spelt and Ensuring a Market#11 On-farm Selection and Management of Locally Adapted and Genetically Diversified Wheat Populations <p>Sofi et al., 2018.</p>

4.2 Using traditional recipes and processing methods

Problem	Ancient grains have variable qualities and are not adapted to standardised food processing methods.
Solution	Traditional recipes and processing methods (such as baking with sourdough, using wholegrain) can be well suited for developing food products from ancient grains and alternative cultivars.
Outcomes	Traditional products produced by the case studies include breads, flours and pasta, other baked goods, crackers, pearled grains, porridge oats and coarse buckwheat. Recipes and processing methods potentially contribute to good health-related outcomes from some grain products, but the evidence is limited and variable.
Practical Recommendation	Seeking collaboration with bakers, millers or other artisan enterprises will allow initiatives to benefit from existing experience and skills with specialist grain processing methods. Opportunities are likely to also exist for more oat-based products, such as müsli, other breakfast cereals, oat crackers and oat bread mixes, oat milk and from brewing. There is a need to be cautious in making health related claims as the research evidence may not be strong enough to support them.
Further Information	Sofi et al 2018 CERERE Practice Abstracts #2 Baking Artisanal and Organic Bread with Traditional Varieties of Durum and Soft Wheat #5 Baking with the Organic Wakelyns Wheat Population (OWP) Flour #13 Diversity of Product Range of Kilbegan

4.3 Consumers as partners in the cereal renaissance

Problem	There is uncertainty about consumer demand for products from ancient grains and underutilised crops among many initiatives.
Solution	Initiatives start with developing local markets for products from underutilised grains through direct selling or community-based initiatives and work closely with local customers. For example, the Spiga project in Italy began as a movement from of consumers interested in local organic bread.
Outcomes	Consumers wanting to reach a better control of their food choices are motivated by concerns for the environment and want to buy locally-grown food or other products with improved sustainability attributes.
Practical Recommendation	<p>There are many ways to communicate the story behind alternative cereal products to consumers, such as in person through direct sales, at the point of sale through the packaging, shelf marks and leaflets and through website, blogs or social media.</p> <p>An integrated approach in relation to where to sell should be explored. Some consumers find it difficult to access local products and engage in alternative food networks and might prefer to buy such products in other outlets.</p> <p>Some of the initiatives of CERERE have also made good experience in finding consumers in cities and other locations by developing sales at national or international market through collaboration with existing processors and industry partners, whereas others are more reluctant to do so for fear of compromising their own values.</p> <p>Local cereal diversification initiatives can also be supported through education and direct involvement of consumers. This can build awareness and understanding and help develop the market in the long-term. Engaging with education activities also increases the social and potentially also economic sustainability of initiatives.</p>
Further Information	<p>CERERE Practice Abstracts</p> <p>#7 Growing Organic Spelt and Ensuring a Market</p> <p>#8 Collective Brand and Participatory Guarantee System (PGS): a Progress Approach in Farmers' Bread Wheat Chain</p> <p>Padel S, Rossi A, D'Amico S, Sellars A, Oehen B (2018) Case studies of the marketing of products from newly bred lines and underutilized crops. Diversifood Project Reports, No. D 5.1. Embedding crop diversity and networking for local high-quality food systems. EU H2020, Grant Agreement n°: 633571.</p>

4.4 Support for networking and collaboration with industry partners

Problem	Many cereal-based initiatives originate from individual farmer or other businesses and evolve into broader networks, but the management of the network often becomes an obstacle
Solution	Working with processors that have identified a market niche or existing market opportunities for added value for alternative cereals. Involving professional facilitators or professional hubs to create spaces for linking farmers with advisors, researchers, breeders, retail.
Outcomes	Involving existing processors can help consumers further afield (related to superfood, health food or traditional products). Support of the networking helps facilitate the active involvement of farmers, bakers, millers and societies, communities and institutions. This will ensure that all interests are respected and can help to match areas of interest to create new opportunities for more farmer to engage with growing alternative cereals crops.
Practical Recommendation	Different actors have different roles in the network. Facilitation can help create the space in which the different roles and interests can be explored and thus improve the collaboration. Collaboration can help identify practical or logistic issues in the processing or distributing cereals and pool knowledge of specialist markets to identify and reduce possible mismatch of needs and interests. This will encourage more producers to grow and engage with underutilized crops. Involvement of professional facilitators can help building network and links with industry and related sectors. This will help identifying and overcoming barriers to supply chain development. Small initiatives in particular to should clarify shared ethics and added value expectations in the early stages of negotiation with larger and more powerful industry partners.
Further Information	CERERE Practice Abstracts: #1 Fair Sharing of the Capital Gain within a Whole Chain Cooperative #2 Collective Brand and Participatory Guarantee System (PGS): a Progress Approach in Farmers' Bread Wheat Chain Padel S, Rossi A, D'Amico S, Sellars A, Oehen B (2018) Case studies of the marketing of products from newly bred lines and underutilized crops. Diversifood Project Reports, No. D 5.1. Embedding crop diversity and networking for local high-quality food systems. EU H2020, Grant Agreement n°: 633571.

4.5 Collaboration with research in multi-actor projects and operational groups

Problem	There is lack of reliable evidence about the agronomic performance of alternative cereal crops under variable conditions, including yield, processing qualities, other product attributes and market demand for alternative cereals.
Solution	Engaging with researchers and other stakeholders in multi-actor projects can help with the development of trials, with getting access to genetic resources (e.g. from genebanks and from other projects) and with expertise related to genetic and economic sustainability.
Outcomes	Access to genetic material and results about site specific performance of cereals cultivars and species and access to findings from related projects. The multi-actor approach will foster the exchange of different types of knowledge between practitioners and researchers for mutual benefit.
Practical Recommendation	<p>Multi-actor and farmer-led research approaches can be used in relation to participatory breeding and genetic resources.</p> <p>They can also be used to improve the understanding of processing qualities, of consumer attitudes, market demand and of rural development opportunities.</p> <p>Researcher involvement in trials about genetic resources can facilitate better communication between gene banks and farmers</p> <p>The integration of farmer knowledge and skills with different scientific disciplines and other sources of knowledge is important. Facilitation (see also Solution 4) will improve the understanding between the different actors and types of knowledge.</p> <p>Collaboration with researcher might also provide access to funding, such as and findings from related projects elsewhere, experiences of practitioners are fed back to researchers to engage them as problem solvers.</p> <p>One opportunity for funding exists in the form of operational groups as part of EIP-AGRI. These offered in the rural Development Programs of many regions of the EU.</p>
Further Information	<p>Diversifood booklet #1 Toolkit to foster multi-actor research http://www.diversifood.eu/wp-content/uploads/2017/09/toolkit_multi_actor_research_BAT_web2.pdf</p> <p>EIP -AGRI report: Horizon 2020 multi-actor projects https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_brochure_multi-actor_projects_2017_en_web.pdf</p> <p>EIP-AGRI Operational Groups – basic principles https://ec.europa.eu/eip/agriculture/en/eip-agri-operational-groups-%E2%80%93-basic-principles</p> <p>EIP-AGRI Brochure on Operational Groups - Turning your idea into innovation. https://ec.europa.eu/eip/agriculture/en/publications/eip-agri-brochure-operational-groups-turning-your</p>

4.6 Using organic farming and quality assurance schemes

Problem	The quality attribute of products from alternative cereals can be difficult to communicate to consumers
Solution	Many cereal initiatives use organic certification and/or other certification schemes, such as participatory guarantee system or geographical indications.
Outcomes	Clear standards of organic and third party or participatory guarantee systems can provide additional quality assurances for consumers. Participatory schemes also contribute to an ongoing process of co-producing knowledge and learning from producers to improve their practices in a cost- effective way.
Practical Recommendation	<p>All EU quality labelling schemes, such as organic certification, geographic indications (PDOs and PGIs) and traditional specialty guaranteed (TSG) can be useful for some cereal initiatives, but also collective marks developed by the initiatives themselves can be very useful and are less demanding than the EU quality labels.</p> <p>Most case study initiatives in the CERERE project work to organic standards and are certified. Organic standards are well developed, and the term organic is recognized by many consumers.</p> <p>Costs for certification or registration will occur in exchange for the permission to use a logo or recognized term, such as organic.</p> <p>Cereal initiatives should develop additional communication strategies and not rely only on organic or other certification to communicate the unique product qualities to consumers.</p> <p>There are a range of other opportunities to create trust and credibility, through personal contacts, farm and field visits and developing good relations along the supply chain.</p> <p>Farm visits can also be a good opportunity for peer-to-peers knowledge sharing to foster collective learning and improvements.</p>
Further Information	<p>CERERE Practice Abstracts</p> <p>#8 Collective Brand and Participatory Guarantee System (PGS): a Progress Approach in Farmers' Bread Wheat Chain</p> <p>DG AGRI: Organic Farming at a Glance.</p> <p>https://ec.europa.eu/info/food-farming-fisheries/farming/organic-farming</p> <p>DG AGRI: Quality labels</p> <p>https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels_en</p> <p>Padel S, Rossi A, D'Amico S, Sellars A, Oehen B (2018) Case studies of the marketing of products from newly bred lines and underutilized crops. Diversifood Project Reports, No. D 5.1. Embedding crop diversity and networking for local high-quality food systems. EU H2020, Grant Agreement n°: 633571. http://orgprints.org/34456/</p>

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CERERE case study reports (unpublished)

CERERE Practice Abstracts:

- #1 Preventive Measures Aimed at Controlling of Spread of *Tilletia Caries* in Organic Cereals
- #2 Baking Artisanal and Organic Bread with Traditional Varieties of Durum and Soft Wheat
- #3 Fair Sharing of the Capital Gain within a Whole Chain Cooperative
- #4 Set-Up of Public Food Procurement (PFP) Programs in School Canteens
- #5 Baking with the Organic Wakelyns Wheat Population (OWP) Flour
- #6 Crop Management for Underutilised and Minor Grains
- #7 Growing Organic Spelt and Ensuring a Market
- #8 Collective Brand and Participatory Guarantee System (PGS): a Progress Approach in Farmers' Bread Wheat Chain
- #9 Internal Rules on Farmers' Seeds: the Example of a "Common"

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- #10 Interests for On-farm Auvergne's Rivet Wheat Pasta Processing
 - #11 On-farm Selection and Management of Locally Adapted and Genetically Diversified Wheat Populations
 - #12 Participatory Research on Agricultural Machinery: Selfbuild of a Grain Brush by and for the Farmers-Bakers
 - #13 Diversity of Product Range