

[Home](#) → [Members details](#) → Resilient Cereals

MEMBER

Resilient Cereals

Living Lab

LL_CERE | Italy



Rete Semi Rurali

The Resilient Cereals Living Lab (LL) is an agroecological initiative involving farmers, agronomists, breeders, researchers, civil society organizations, policy makers, and citizens with the aim of restoring cultivated biodiversity in the low-input organic cereal sector. The LL develops cultivars of populations/OHMs with high genetic diversity that adapt to local conditions over time and experiments with new agroecological practices in response to the need to restore biodiversity and diversification in fields and supply chains. The LL supports knowledge exchange and collective action by farmers, different actors, and citizens to replicate agroecological innovations and promote institutional frameworks that support the agroecological transition.

Aim

The LL adopts a “seed-to-plate” approach:

- Promote cultivated biodiversity and the use of populations/OHM adapted to local conditions and landraces in the arable crop and legume sector;
- Promote seed exchange between farmers and strengthen the local role of the Community Seed Bank (CSB);
- Promote a participatory approach to plant and culinary breeding;
- Promote cultivated biodiversity along local alternative value chains with products of high nutritional value;
- Strengthen the science-policy interface to influence local and national policy frameworks in support of cultivated biodiversity and plant genetic resource conservation;
- Promote citizen science tools;
- Strengthen knowledge exchange and co-learning between farmers and other actors on agroecological practices;
- Promote agroecological innovation and its scalability.

Background information

The LL brings together a network led by the Resilient Cereals Operational Group (OG), which involves Rete Semi Rurali and includes around 20 stakeholders, including farmers, researchers, agronomists, technicians, and universities (Florence and Pisa). Since 2010 they have been working to reintroduce cultivated

reference and input. Since 2010, they have been working to reintroduce cultivated biodiversity in the low-input organic cereal sector, experimenting with populations (CCPs) and organic heterogeneous material (OHM) and promoting local and agroecological food chains. In 2014, after years of co-development on farms, a soft wheat population was certified for the first time in Italy under the name SOLIBAM Floriddia. Over time, the use of OHM by different LL farmers in various locations has favoured the differentiation of cereal populations, each of which is uniquely adapted to its environment. This has created a rich reservoir of biodiversity both locally and on a larger scale and was the result of a participatory breeding process conducted with the community. The LL continues to work on the cereal supply chain with a seed-to-plate approach, involving millers, bakers, and processors in exploring alternative processing methods. Over the years, the niche of the initial actors has expanded into a broad, open, and dynamic network that has consolidated its participatory and horizontal governance structures, experimenting with new agroecological solutions (*e.g., intercropping, soil microbiomes*) in low-input cereal sectors.

Funding structure

The LL has been supported over time by CAP measures dedicated to strategic cooperation and operational groups of the European Innovation Partnership in agriculture. The research activities are supported by Horizon Europe projects.

Activities

A diverse and transdisciplinary group of stakeholders, including agronomists, geneticists, farmers, technicians, academics, policymakers and citizens, carry out LL activities. The main on-farm activities are as follows:

- Development of Population/OHM cultivars;
- Strengthening of a decentralized cereal seed system;
- Conservation and multiplication of cereals, and legumes landraces;
- Participatory plant breeding;
- Culinary breeding;
- Experimentation with new agroecological processing methods (*e.g., bread and pasta from populations*);
- Experimentation with microorganism-based modulators on soft and durum wheat;
- Experimentation with agroecological techniques such as intercropping;
- Organization of agroecological dissemination events

Methods, stakeholder engagements and tools

The embeddedness of Rete Semi Rurali in local communities has enabled the creation and consolidation of a diverse network of actors based on shared values, motivation, and mutual trust. A participatory and multi-stakeholder approach that promotes co-design and co-learning processes has always been at the core of the network's activities. Over the years, the commitment of the actors within the LL and the development of strong relationships have been nurtured through regular events, including on-farm events and trials, participatory plant breeding, and culinary breeding initiatives, as well as workshops, farm visits, and training sessions. These activities involve all stakeholders, from farmers to citizens, strengthening and sustaining participation, building trust, raising awareness, and reinforcing co-design processes, consolidating co-learning and collaboration between farmers, researchers, citizens, and policymakers, and supporting a long-term strategy.

Achievements

The LL activities have contributed to the scalability of the use of CCPs/OHM and influenced the national policy framework in support of cultivated biodiversity (e.g. the decree regulating the notification of OHM (621/2024)). The most significant tangible results are as follows:

- Restoration of large-grain varieties (modern grains were selectively bred for smaller plants);
- Establishment of an informal seed exchange network;
- First Italian notification of the SOLIBAM Floriddia population;
- Creation of the Population/OHM label for marketable CCP/OHM products;
- Introduction of high-nutrient flours and products into the local supply chain;
- Development of new milling techniques for population grains;
- Testing the sensory characteristics of new products through culinary breeding events;
- Implementation of the SeedLinked digital system, which promotes free access to information on cultivar evaluation (<https://seedlinked.com/>);
- Enhance LL governance to ensure democratic and participatory processes;
- Support the scalability of agroecological practices in Tuscan areas.

Publications

PUBLICATIONS

Podcast:



- <https://www.controradio.it/cereali-resilienti/>

Video:



- <https://youtu.be/WRDkUd6bpI0>

Scientific paper:

- Bocci, R., Bussi, B., Petitti, M., Franciolini, R., Altavilla, V., Galluzzi, G., ... & Ceccarelli, S. (2020). Yield, yield stability and farmers' preferences of evolutionary populations of bread wheat: A dynamic solution to climate change. *European Journal of Agronomy*, 121, 126156. <https://doi.org/10.1016/j.eja.2020.126156>



Dissemination materials:

- <https://rsr.bio/notiziario-38/> ; <https://rsr.bio/notiziario-29/>

"To each land its seed... to each seed its land"

- Resilient Cereals Moto

Photos



Source: RSR



Source: RSR





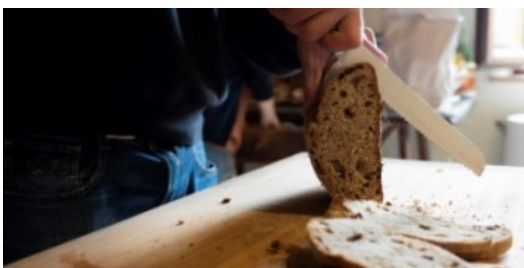
Source: RSR



Source: RSR



Source: RSR





Source: RSR



Source: RSR



Contact

Website: <https://rsr.bio/>

Instagram: <https://www.instagram.com/semirurali/>

E-mail: info@semirurali.net

Telephone: [+39 3481904609](tel:+393481904609)



agroecology.ps@ilvo.vlaanderen.be

Useful links

[Disclaimer and Privacy Policy](#)

[Credits](#)

[Contact](#)

[Subscribe to our newsletter](#)

Follow us



[Manage cookies](#)

Coordinator: Projektträger Jülich (Germany) | Co-coordinator: Agence nationale de la recherche, ANR (France)
