

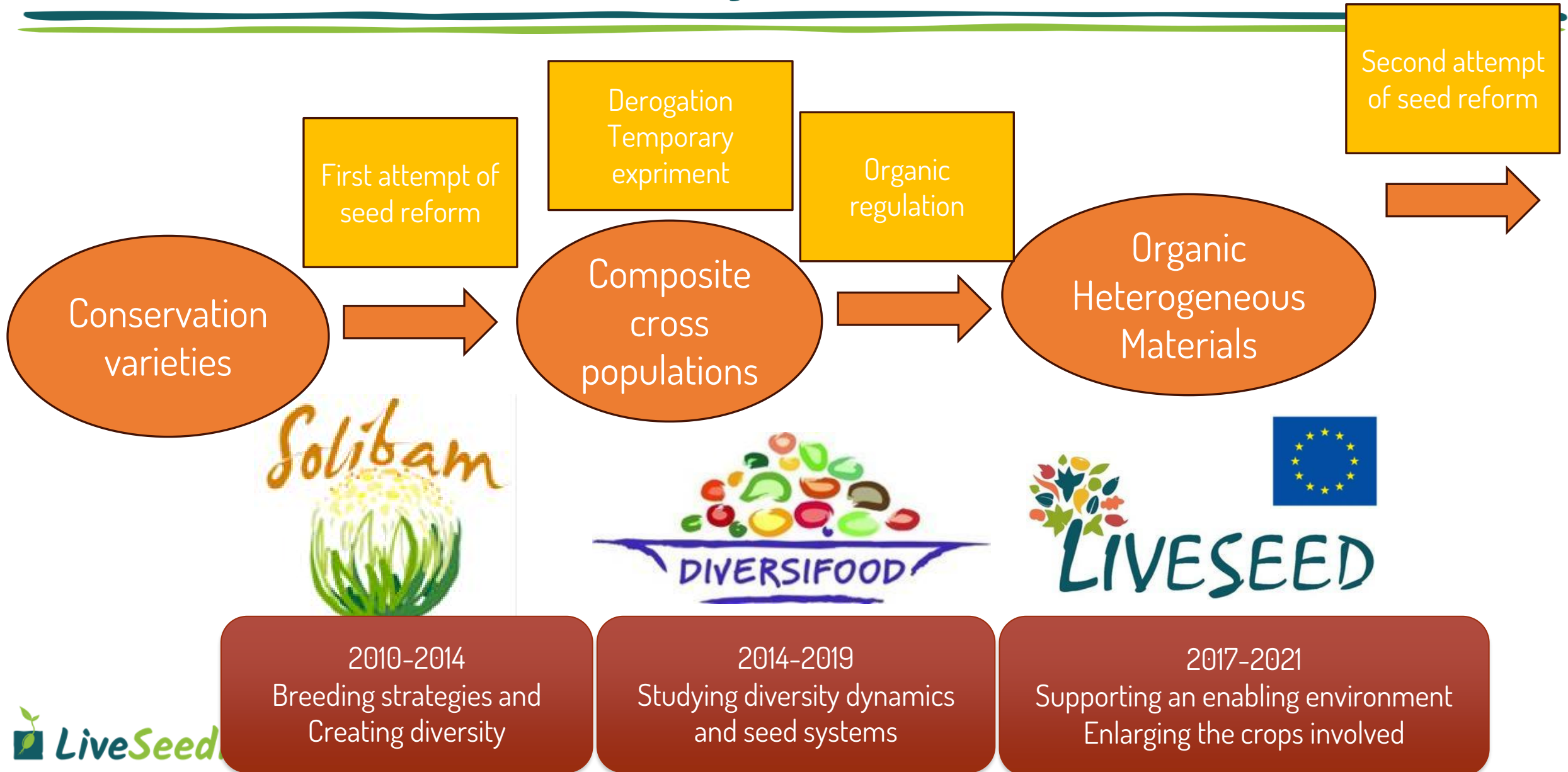
Label strategies to enhance visibility

The OHM logo by Rete Semi Rurali in Italy

Francesca Gori (RSR)



Science & Policy



Our background

CCPs

20.3.2014

EN

Official Journal of the European Union

L 82/29

COMMISSION IMPLEMENTING DECISION

of 18 March 2014

on the organisation of a temporary experiment providing for certain derogations for the marketing of populations of the plant species wheat, barley, oats and maize pursuant to Council Directive 66/402/EEC

(notified under document C(2014) 1681)

(Text with EEA relevance)

(2014/150/EU)



Italian cereal populations

Registered Italian Populations as of 31 December 2018

➤ Soft (bread) wheat: 8

➤ Durum wheat: 3

➤ Barley: 1

❖ Emilia-Romagna: Bioadapt, Bio², BioAppennino

❖ Toscana: Solibam tenero Floriddia, Mix tenero Toscana Pa1, Mix tenero Toscana 1, Evoldur (durum), Mix duro Toscana Pa1

❖ Umbria: Barley Mix 48

❖ Molise: SOLIBAM duro Petacciato

❖ Basilicata: Carosella, SOLIBAM duro Recchia

❖ Sicilia: Solibam tenero Li Rosi, Angelo (durum)

RSR SOLIBAM/FURAT Bread Wheat

The original evolutionary population (EP) was created in 2009 at ICARDA, Syria mixing **1996 crosses** (F2, F3 and F4). In Italy it has been cultivated in **2 organic farms** continuously since 2010-2011 evolving in 2 distinct EPs: **SOLIBAM Floriddia** in Tuscany and **SOLIBAM Li Rosi** in Sicily.



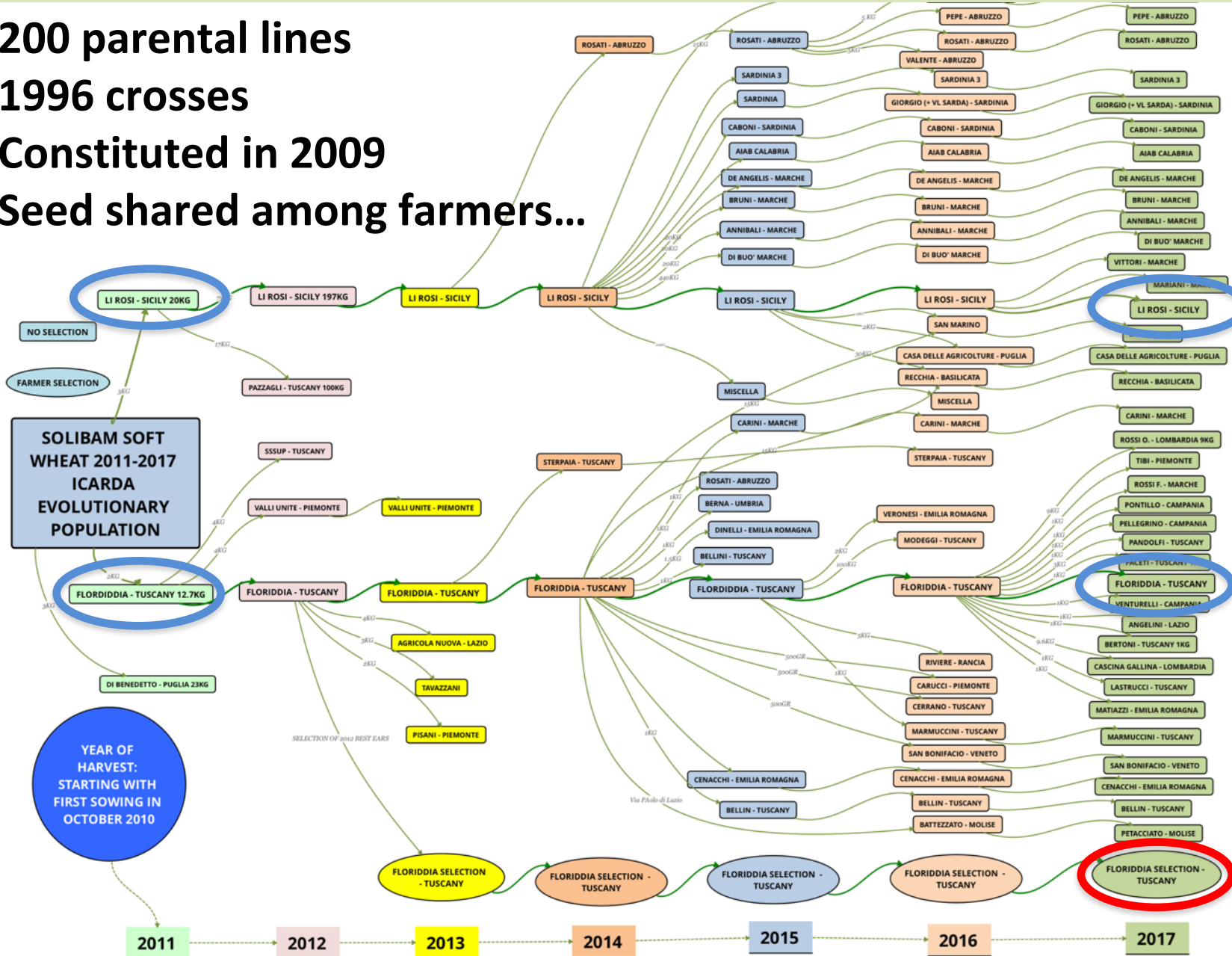
SOLIBAM/FURAT bread wheat seed sales

- 2017  2 tonnes
 - 2018  2.4 tonnes
 - 2019  6 tonnes
-
- 2017  11.4 tonnes
 - 2018  15.2 tonnes
 - 2019  23.7 tonnes

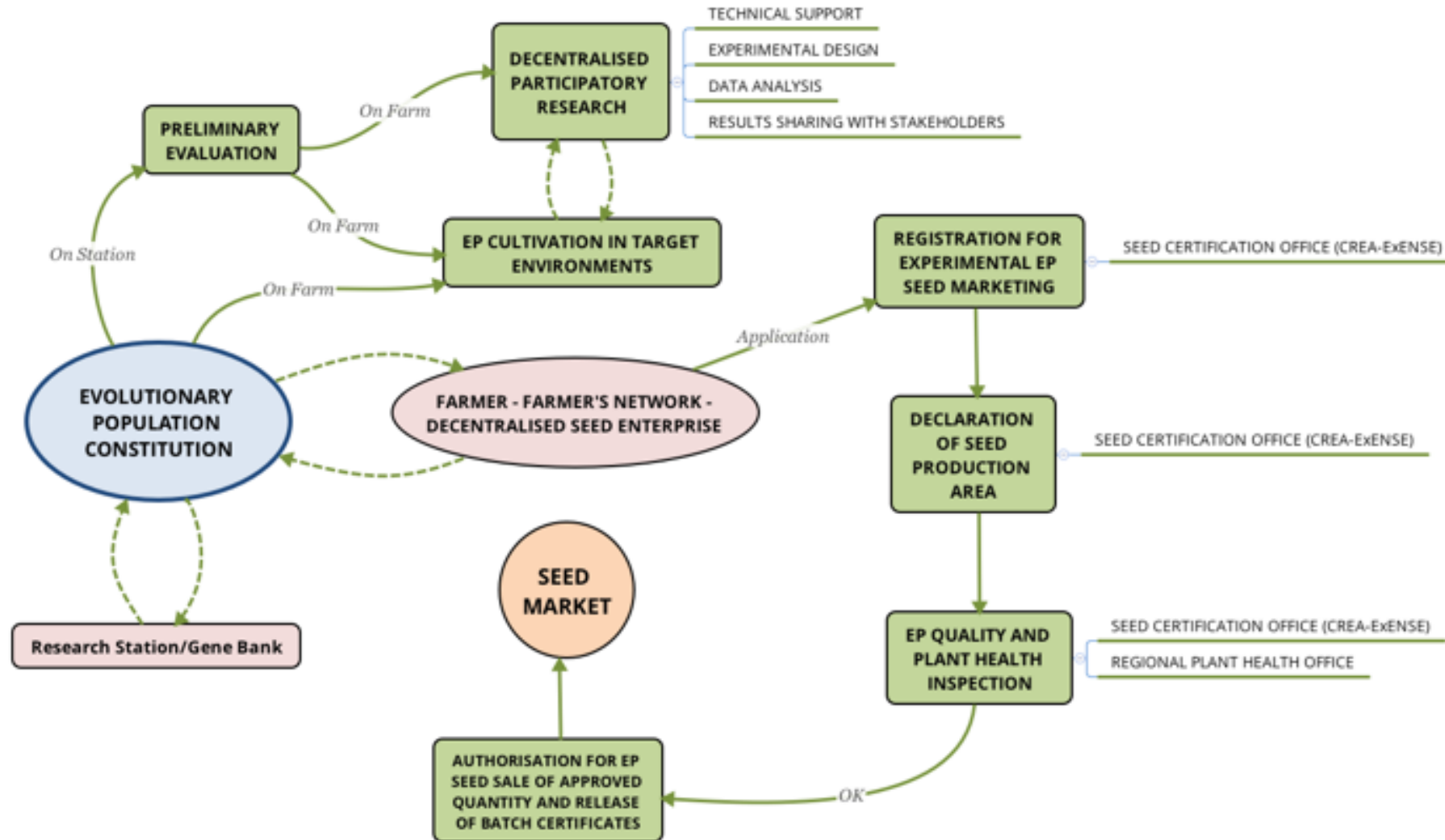


SOLIBAM/FURAT Bread Wheat

- 200 parental lines
- 1996 crosses
- Constituted in 2009
- Seed shared among farmers...



The evolutionary populations seed system



Our achievements



Sol ibam

Seed certification



First logo on CCPs

First produce on the market with the logo



From practice to science



Yield, yield stability and farmers' preferences of evolutionary populations of bread wheat: A dynamic solution to climate change

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ARTICLE INFO

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Evolutionary plant breeding
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Farmers' preferences
Discretional selection

ABSTRACT

The role of biodiversity in plant breeding needs to be reconsidered to cope with the complexity, location specificity and combined challenges of climate change, human population increase, human health and food security, safety and sovereignty. From a biological viewpoint, heterogeneous plant populations derived from evolutionary plant breeding may address most of these grand challenges. Field trials were conducted over four years and four locations under organic farming conditions to test the hypothesis that evolutionary populations planted in contrasting locations, evolve adapting to the local conditions and becoming distinct from one another. The experiment also included mixtures, landraces and a modern variety of bread wheat. The results show evidence of divergent selection for grain yield under the sole effect of natural selection by which the best performing evolutionary populations yielded as much or more than the commercial variety. Farmers' selection within one of the evolutionary populations was effective in improving yield and yield stability above those of the original population across years and locations. Farmers' preference was not always associated with grain yield and was not gender dependent. We conclude that evolutionary populations are able to gradually evolve, adapting to each environment in which their seed is multiplied, reaching high and stable yield levels thus ensuring income to farmers, both as seed and as grain.

1. Introduction

Biodiversity is key to food security, making production systems more resilient (FAO, 2019); it is also an essential resource for crop improvement, allowing the adaptation of agriculture to a changing climate and consumer preferences (Hufford et al., 2019; van Frank et al., 2020). However, biodiversity in general, and crop biodiversity in particular, are threatened and plant breeding is thought of being one of the causes (van

der Wouwe et al., 2010). Indeed, already in 1950, Sir Otto Frankel warned, "From the early days of plant breeding, uniformity has been sought after with great determination. For this there are many reasons – technical, commercial, historical, psychological, and aesthetic. The concept of purity has not only been carried to unnecessary length but that it may be inimical to the attainment of highest production" (Frankel, 1950).

In 2009, the concept of 'planetary boundaries' was proposed to

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Our OHM logo 1



Rete Semi Rurali
Materiale Eterogeneo Biologico

A graphic outline easy to understand
that gives the idea of diversity

Name of the notifier

Organic Heterogenous Material

Our OHM logo 2



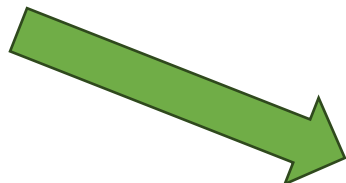
Name of the farmer producing
seeds



Rete Semi Rurali
Materiale Eterogeneo Biologico
[**Frumento tenero - FURAT**]



Name of the OHM



Name of the species



An open source pledge

A well defined graphical identity

The « social » rules you agree on opening the seed wrap

The history of the CCP and the breeding process

The rules on IPRs, the seeds are not protected by PVRs but there is an open source pledge



**Questa semente
è il risultato
di anni di ricerca
partecipata.**



Rete Semi Rurali
Materiale Eterogeneo Biologico

Queste sementi non sono protette da proprietà intellettuale, acquisendole hai il privilegio di utilizzarle in piena autonomia, con alcune limitazioni.

Il nucleo iniziale è stato costituito nel 2009 all'ICARDA (Centro di ricerca agricola in Siria) su indicazione di Salvatore Ceccarelli mescolando il seme di 2000 linee provenienti da tutto il mondo. Nel 2010 è arrivato in Italia nell'ambito del progetto di ricerca europeo SOLIBAM (2010-2014), grazie ad AIAB partner del progetto. Negli anni successivi, un numero crescente di agricoltori, in collaborazione con Rete Semi Rurali, lo ha coltivato e riprodotto, partecipando alle sperimentazioni volte a valutarne la capacità di adattamento nell'ambito del progetto europeo DIVERSIFOOD (2014-2019), di cui Rete Semi Rurali è partner. La semente SOLIBAM Tenero Floriddia Popolazione è coltivata dal 2010 sulle colline centrali della Toscana, su terreni argillosi.

La commercializzazione di questa popolazione non omogenea è possibile grazie alla Decisione della Commissione Europea 2014/150/EU che permette in via sperimentale la commercializzazione delle sementi di "materiale eterogeneo" di alcuni cereali. Si tratta di una rivoluzione nel settore sementiero perché per la prima volta viene consentita la vendita di sementi di varietà non omogenee, con procedure fitosanitarie adattate a questo nuovo contesto.

IN PARTICOLARE HAI:

1. la libertà di riseminare le sementi in azienda;
2. la libertà di condividere o vendere le sementi ad altri con procedure di certificazione adattate a questo nuovo contesto;
3. la libertà di sperimentare e studiare le popolazioni e di condividere o pubblicare informazioni a loro relative;
4. la libertà di selezionare o adattare le popolazioni, fare incroci con esse o usarle per costituire nuove linee e varietà.

IN CAMBIO, TI IMPEGNI A:

1. non limitare l'uso di queste sementi o dei loro derivati con brevetti o altri strumenti di proprietà intellettuale;
2. ad includere questa dichiarazione in ogni trasferimento di queste sementi o dei loro derivati;
3. a rendere disponibili i prodotti della ricerca fatta partire da questa popolazione.

Rete Semi Rurali  *Materiale Eterogeneo Biologico*

 **LiveSeeding**

The Pledge

rights

- ❑ Freedom to resow the grains/seeds
- ❑ Freedom to share/market the seeds
- ❑ Freedom to further develop the OHM

obligations

- ❑ Do not apply any IPRs on the seeds and their developments
- ❑ To use the same pledge in spreading the seed
- ❑ To make available to the providers further developments of the OHM

Where we are now



We need to define the rules for using the logo;



We have to negotiate with different groups/farmers how to manage the logo (seed/produce) and the % of money that can come back to RSR



We need to define the controls/checks on multiplication fields (in Italy there will public certification of the OHMs for the first 2-3 years within the National Plan on Organic Seeds)



LiveSeeding

