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## What is behind the management of small grain cereals Biological Resources Centre?

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A **Biological Resources Centre (BRC)** gathers collections which are, in the case of agronomical BRC, most of the time patrimonial genetic resources (landraces, breeding lines and registered cultivars). Some of its activities are well known as the **preservation, propagation and diffusion of genetic resources**.

Strongly linked to its first mission, BRC is also involved in **genetic resources valorisation**. These activities are carried out in two ways: by being a member of genetic resources networks and being involved directly in scientific programs at national and European level.

## Samples distribution

## Elaboration of panel

## Results synthesis

## Expertise

## Field evaluation

## Database updating



## Management of the collection

Around **27 000 accessions** of major agronomical species, wheat, barley, oat, rye, triticale and wild relatives, are conserved in the small grain cereals BRC. Activities of collection's management have been certified under the French standard NF S 96-900 specific of Biological Resources Centre for these activities of receipt, preparation, propagation and provision of small grain cereal biological resources.



## Diversity's valorisation

Genetic diversity held in BRC collection is characterized and analyzed in several project to better understand its structure.

### European Networks (ECPGR)

Coordination of Wheat working group, member of Barley working group

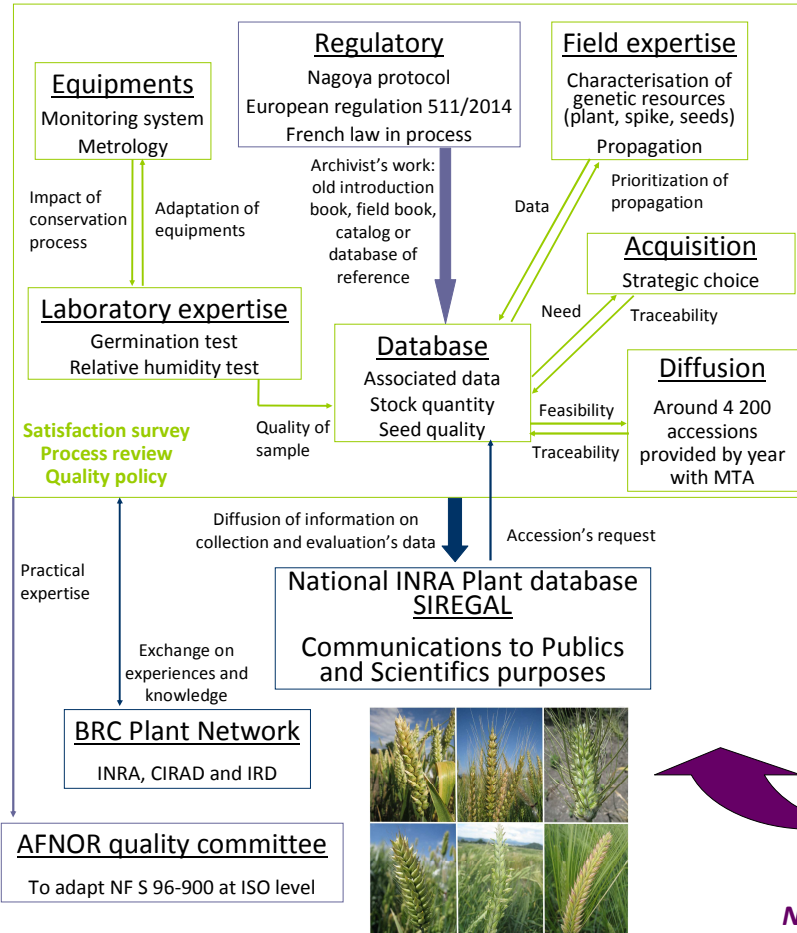
Projects: **TRAID & HORDEVA**

### Analysis of Agronomical diversity in French Networks

GxE interactions, Elaboration of panel for breeding purpose

Projects: **COLNATOR, COLNAT**

## Quality system



### Analysis of Agronomical diversity

GxE interactions, N efficiency, low input level, Elaboration of panel for fine phenotyping on biotic and abiotic factors

Projects: **Breedwheat, Whealbi**

### LD Analysis

LD mapping, Genomic selection, GWAS

Project: **CropDL**

### Analysis of molecular diversity at different chromosome scales

Population genetics, Allele mining

Project: **3B/1B sequencing**

### Analysis of collections' structure

Temporal and spatial structures

Projects: **Core Collection, Breedwheat**

### Material exchanges

To analyse diversity between various origin Chinese/French; Russian/French

### Technological diversity

Bread making quality  
Protein content

Project: **Core collection**

**Better characterization of collections: agronomical, molecular and technological data**

**New diversity**

**Knowledge on structure at spatial and temporal scales of collections**

