

EXPERTISE IN

BioGEVES

# Molecular biology AND Biochemistry



Expertise  
for the seed  
& plant sectors



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⇒ BioGEVES page



# BioGEVES internationally recognised expertise, regulatory missions and methodological development

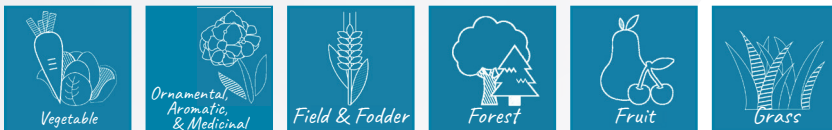


→ Under the aegis of **INRAE**, the **Ministry of Agriculture** and **SEMAE**, the BioGEVES laboratory of **GEVES** performs a wide variety of activities:

- **National and European research programs** (e.g. CASDAR, FranceAgriMer, H2020, FSOV)
- **Guidance and development** on request for the seed sector
- **Adaptation, optimisation and validation** of protocols, participation in national and international standardisation (AFNOR, ISO, ISTA, UPOV, ISHI-Veg)
- **Variety and seed characterisation** for official studies related to registration and protection of new plant varieties and seed certification
- **National Reference Laboratory** for GMO Detection

## BioGEVES: skills & expertise for the seed & plant sector

→ For all cultivated species:



→ On all samples:

- Seeds: individual, bulk, crushed
- Fresh plant material (whole plants, leaves, seedlings, sprouts, *in vitro* culture, bulbs)
- Processed plant products



## BIOCHEMISTRY

**Technological and nutritional quality analysis**

### Compositional analysis

*oil content, protein content, fatty acid profiles*

**Antinutrients assay** e.g. *glucosinolates, tannins, antitrypsic activity*

**Specific constituent assay** e.g. *asparagine*

### Customised development:

NIRS and NMR prediction models, biochemical constituent assay

**Organisation of Interlaboratory comparison tests**

## DETECTION

**Pathogen detection on seeds and plants**

*viruses/viroids, bacteria, fungi, nematodes*

**Identification of pathogen resistance genes**

for characterisation for variety

**Detection and quantification of GMO events.**

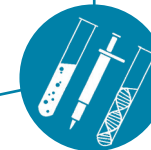
BioGEVES is COFRAC accredited and a designated National Reference Laboratory for GMO detection in maize (seed), soya, oilseed rape and flax

### Customised development

Developpement and validation of pathogen detection methods

### NRL Plant Health

for regulated non-quarantine pests on seed



## GENOTYPING

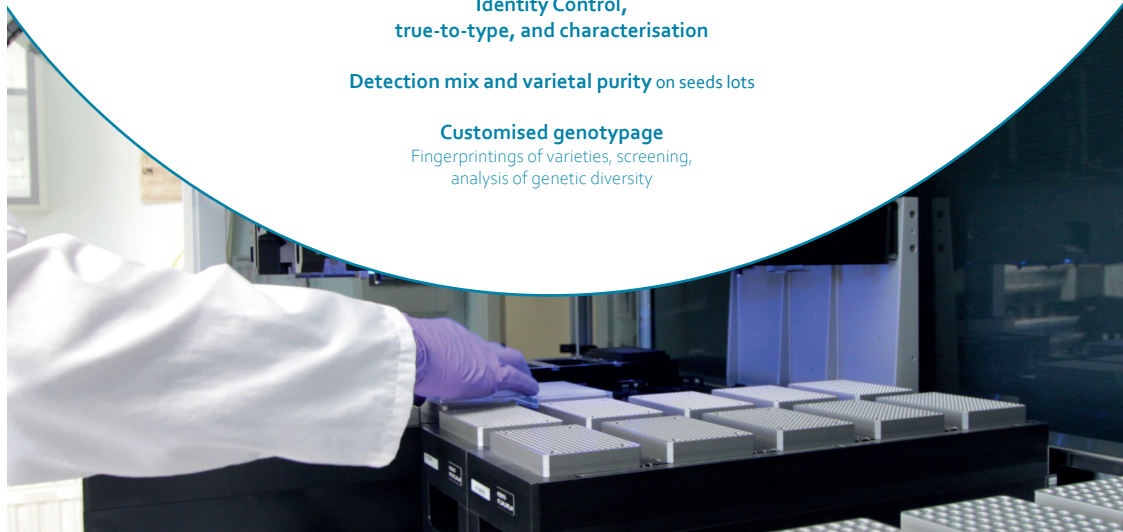
DNA analysis by molecular biology

Identity Control, true-to-type, and characterisation

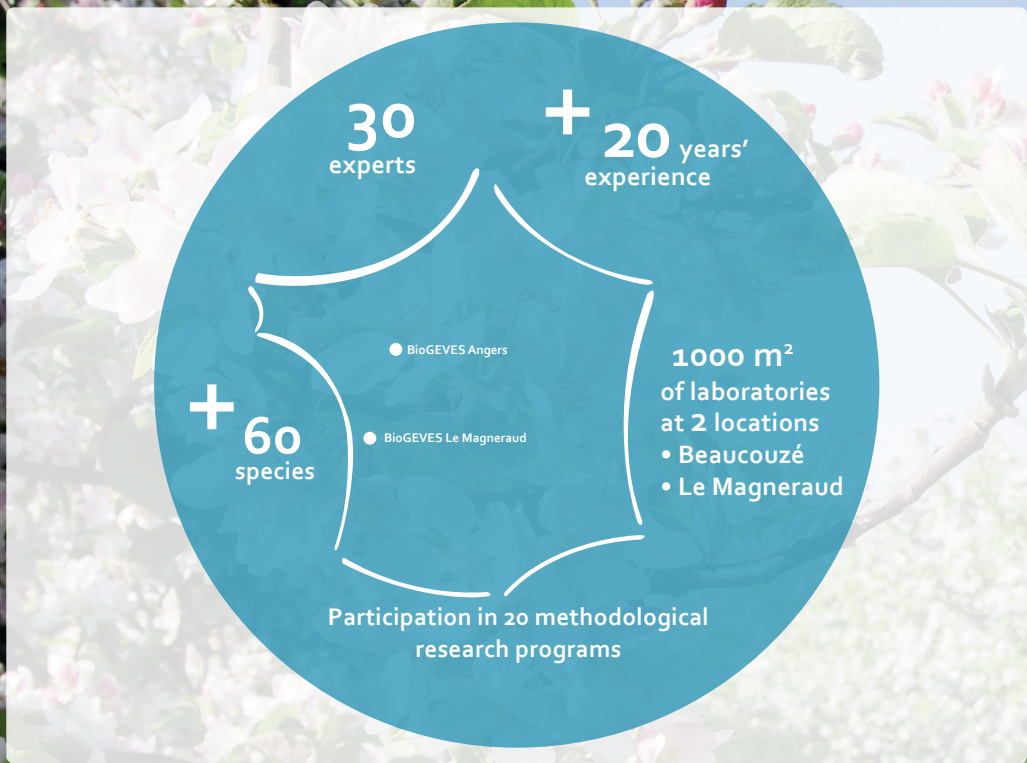
Detection mix and varietal purity on seeds lots

### Customised genotyping


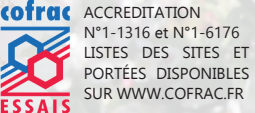
Fingerprints of varieties, screening, analysis of genetic diversity








**Recognition & Quality**

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