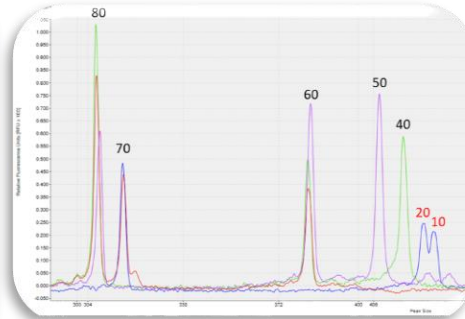




**inov3PT**  
SEED POTATO  
FOR THE FUTURE

# IdEvol

Technological development for the identification of potato varieties using microsatellite markers in support of certification



## Abstract

Identifying potato varieties by laboratory analysis is useful in various fields of application, such as seed potato production, point-of-sale control, variety protection, etc. To carry out these analyses, a molecular profil similar to a specific barcode is generated for each variety. This profile is obtained by PCR with molecular markers from a DNA sample.

Five French laboratories use the same method and share a common database (IdeAle) in which several thousand varietal profiles are stored. The method is robust, but unsuitable for managing large numbers of samples and requires the use of harmful products.

As part of this project, we sought to automate part of the method using an automatic sequencer (Qiaxcel Advanced). This instrument enables us to carry out the analyses more quickly while limiting the exposure of laboratory staff to harmful products. To continue using our database, we also had to ensure that the usual markers generated profiles comparable to those obtained using the traditional method. We also looked for new markers.

We succeeded in transferring 6 of the 8 usual markers to the new instrument and identified 3 new usable markers. To do this, we extracted DNA from more than 300 varieties, distributing them among the partner laboratories. The varieties were then analysed with the 8 markers and the profiles obtained compared with the reference profiles. The 3 new markers were also used.

## TECHNICAL MEMO

**Call for projects:**  
CASDAR 2018 Semences et Sélection Végétale

**Project leaders:**



**Project duration:** 36 months

**Start/End of project:**

01/01/2019 – 30/06/2022

**Partners:**

- The 3 regional growers organisations : Comité Centre et Sud, Comité Nord, Bretagne Plants
- INRAE UMR IGEPP
- Service Commun des Laboratoires

**Other technical partners (excluding financing):**

- Service Officiel de Contrôle (SOC)

**Partners associated with the steering committee :**

- Secrétaire technique section pomme de terre du CTPS (GEVES)
- BioGeves

**Financial support :**



**FN3PT/inov3PT project leader:**  
Sylvie Marhadour

**FN3PT/inov3PT project team:**  
Amandine Méar

**Link to the varietal identification network:**



April 2024