



# GEVES PRICE LIST 2024

*Field & Forage*

**Variety and Seed Study and Control Group**



# GEVES

Expertise & Performance


























[www.geves.fr](http://www.geves.fr)



# GEVES

Expertise & Performance

## SUMMARY

	GEVES in a few words	3
	Role and quality	4
	Place an order	5
	Your contacts at GEVES	6
	Supply of samples to the SNES	7
	Order an analysis	9
	All Species	10
	Beets - Chicorys - Potatoe	14
	Protein crops	18
	Cereal	22
	Fodder plants	27
	Seed mixture species	34
	Fiber plants	35
	Corn and sorghum	37
	Oil plants	40
	Micro-cleaning	44
	Cytology	45
	Radiography 2D and tomography	46
	Biostimulation, Biocontrol, evaluation of treatment	47
	Disease test supplies : inoculum and reference material	48
	Sector support	49
	Terms and Conditions	50
	Publications	51

# GEVES: A unique &

GEVES is a **Public Interest Group** with three founding partner organisations:

**INRAE**

- The French National Research Institute for Agriculture, Food and Environment (INRAE) - 60%



- The French Ministry of Agriculture and Food (MAA) - 20%



The French Interprofessional Organisation for Seeds and Plants - 20%

This unique set-up ensures GEVES's **independence** and **neutrality** in carrying out its activities in accordance with its regulatory and official missions and mandates. The union of state, research and sector expertise ensures that all aspects of the sector are fully taken into account.

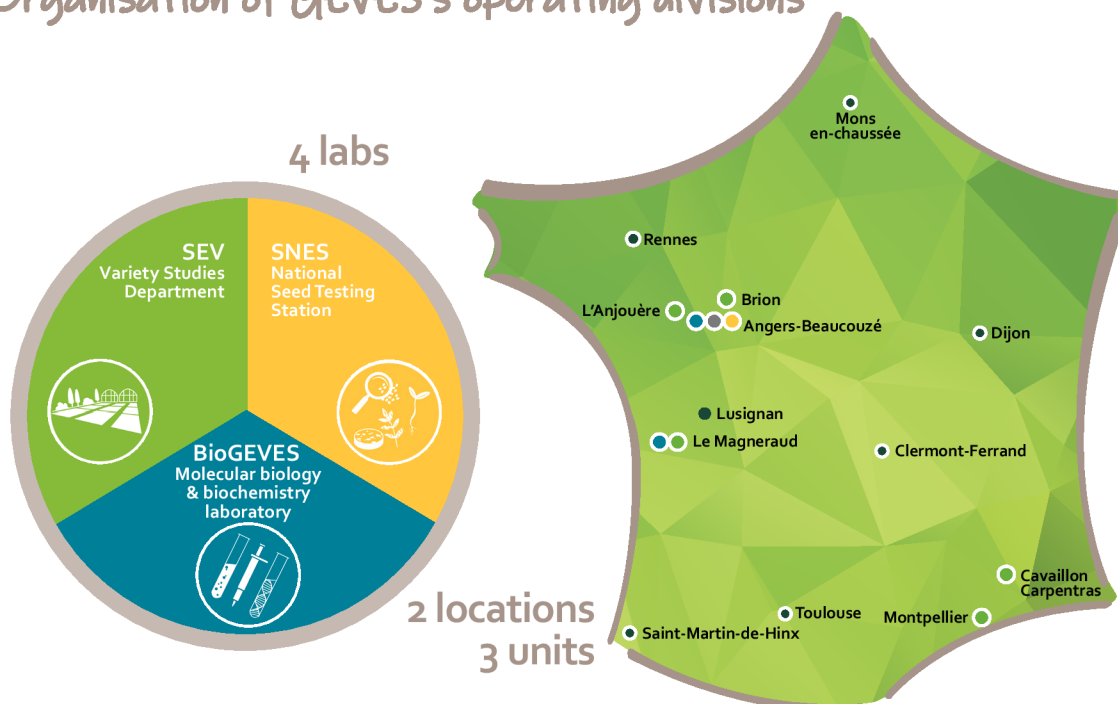
## Governance of GEVES

GEVES's Executive Board of Directors is composed of 13 members:

- 6 representatives from INRAE
- 2 representatives from the Ministry of Agriculture and Food
- 2 representatives from GNIS
- 2 staff representatives from GEVES
- The President of the CTPS

as well as a government controller (Ministry of Research) and a State Controller.

## Organisation of GEVES's operating divisions





## GEVES's missions

GEVES has official, regulatory missions and carries out testing activities and methodological development which is necessary for:

- ▶ National listing of new varieties in the Official French Catalogue
- ▶ Plant variety protection
- ▶ Official seed testing as part of its NRL mandates for seeds, GMOs. and plant health (RNQP-matrix seeds)

GEVES is also responsible for the national coordination of plant genetic resources on behalf of the Ministry of Agriculture.

GEVES is the National Reference Laboratory for:

- ▶ GMO detection: GMOs in maize (seed) and soya, rapeseed and flax (seed and vegetative parts) by Decree of 19 octobre 2015
- ▶ quality testing of seeds and propagating material by Decree of 1 March 2017
- ▶ in the field of plant health by Decree of 20 November 2020

GEVES is an approved laboratory for certain seed health quality tests

GEVES is accredited by ISTA for all species. It carries out official testing, particularly for seed exports: for phytosanitary passports and certificates as well as Orange and Blue International Certificates (OIC and BIC).

GEVES makes its specialised expertise openly available to the plant and seed sectors, providing high-quality services to a range of private customers.

## Activities

To carry out its missions, GEVES performs a wide range of activities:

- ▶ Description of varieties and evaluation of genetic progress
- ▶ Quality testing for seeds and seedlings
- ▶ Methodological research
- ▶ Management of plant genetic resources
- ▶ Training courses
- ▶ Exams
- ▶ Consulting and expertise
- ▶ International cooperation
- ▶ Monitoring of the French network of seed testing laboratories
- ▶ Organisation of Proficiency Tests (PT)
- ▶ Communication
- ▶ Expertise
- ▶ Inoculum production
- ▶ Analysis to evaluate the efficiency of treatment products

FOCUS



### Quality, Recognition & Accreditation

GEVES benefits from a global and harmonised Quality Management System.

GEVES is recognised as follows:

- ▶ Certification ISO 9001: version 2015 – BioGEVES and VCUS variety testing (Value for Cultivation, Use and Sustainability) since 2009
- ▶ Accreditation of GEVES's SNES and BioGEVES laboratories by COFRAC according to ISO 17025 standard:
  - GEVES Beaucauzé: COFRAC N°1-1316 (since 2002).
  - GEVES Le Magneraud: COFRAC N°1-6176 (since 2004).
- ▶ Accreditation by ISTA since 2001 (N°FRDL0200) for seed testing
- ▶ Entrusted by the CPVO for DUS variety testing since 2012.

Seed quality testing  
**SNES**



**ORDER YOUR ANALYSE  
ONLINE**

<http://dsn.geves.info>

- Enter your order
- Print the order summary and attach it to to your sample

For faster processing of your request, please order online



**SEND YOUR ORDER VIA POST**

- Complete the form corresponding to your order (OIC request or analysis order form) and join the form to your sample
- Send the sample to:  
**GEVES - Service clients SNES**  
3 rue Henri Becquerel - CS 90024  
49071 Beaucouzé Cedex  
FRANCE

Biomolecular and biochemical testing  
**BioGEVES**



**ORDER YOUR ANALYSE  
ONLINE**

[biogeves.analyses@geves.fr](mailto:biogeves.analyses@geves.fr)



**SEND YOUR ORDER VIA POST**

- Send the sample to:

**Detection Unit**

**BioGEVES**  
3 rue Henri Becquerel - CS 90024  
49071 Beaucouzé Cedex  
FRANCE

**Genotyping/Biochemistry Unit**

**BioGEVES - Le Magneraud**  
CS 40052 - Saint-Pierre d'Amilly  
17 700 Surgères  
FRANCE

Variety testing at the **SEV**



**REQUEST A DENOMINATION TEST**

[christelle.godin@geves.fr](mailto:christelle.godin@geves.fr)



**REQUEST A FIELD TEST**  
DUS (Distinction Uniformity Stability)

[celine.delarue@geves.fr](mailto:celine.delarue@geves.fr)

**GEVES - Service clients SEV**  
25 rue Georges Morel - CS 90024  
49071 Beaucouzé Cedex  
FRANCE

# Your contacts at GEVES

To contact a GEVES staff member by email: *firstname.surname@geves.fr* - area code number: +33(0). .. ..

## Sector support Training courses, ILC, Audits

Thibaut  
Decourcelle  
+33 (0)2 41 22 58 17



Fabienne  
Brun  
+33 (0)2 41 22 58 91



LNR  
lnr.semences@geves.fr

ILC :  
eil.semences@geves.fr

TRAINING COURSES :  
formation.semences@  
geves.fr

AUDITS :  
audit.semences@  
geves.fr

SNES / LNR :

BioGEVES :

Caroline  
Le Quilliec  
+33 (0)5 17 06 96 12



Rachel  
Tessier  
+33 (0)2 41 22 85 93



SEV :

## SNES Management



SNES Director  
Clotilde Polderman-Roussille  
+33 (0)2 41 22 58 10



Assistant  
Estelle Bertel  
+33 (0)2 41 22 58 02

## SNES Customer Services

[service.clients@geves.fr](mailto:service.clients@geves.fr)



Head of Customer Service and Sampling  
Alice Richard Jolly: +33 (0)2 41 22 58 13

• Customer Service SNES

+33 (0)2 41 22 58 28

## SNES Technical Contacts



Head of Physical Analysis Laboratory  
Aurélie Charrier: +33 (0)2 41 22 58 40

- Radiography 2D/3D
- Purity, micro-cleaning
- Water content
- Botanic

Sherif Hamdy +33 (0)2 41 22 58 30  
Philippe Pannetier +33 (0)2 41 22 58 43  
Céline Herbert +33 (0)2 41 22 58 30  
Diogo Tobolski +33 (0)2 41 22 58 94



Head of Germination Laboratory  
Sylvie Ducournau: +33 (0)2 41 22 58 70

- Floral, vegetable, woody, pulses and forest species
- Beetroot, vegetable, forage grasses
- Agricultural crop species

Valérie Blouin +33 (0)2 41 22 58 78  
Pierre Soufflet +33 (0)2 41 22 58 82  
Philippe Garreau +33 (0)2 41 22 58 77



Head of Pathology Laboratory  
Jaiana Malabarba: +33 (0)2 41 22 58 50

- Seed health
- Variety resistance
- Seed treatment evaluation

Isabelle Serandat +33 (0)2 41 22 58 54  
Laurent Guyot +33 (0)2 41 22 58 59  
Sophie Perrot +33 (0)2 41 22 58 58  
Geoffrey Orgeur +33 (0)2 41 22 58 56

## BioGEVES :

[biogeves.analyses@geves.fr](mailto:biogeves.analyses@geves.fr)



Head of BioGEVES  
René Mathis  
+33 (0)2 41 22 58 34



Customer relationship  
Caroline Le Quilliec  
+33 (0)5 17 06 96 12



Detection Unit  
Amandine Lê Van  
+33 (0)2 41 22 58 39



Biochemistry Unit  
Patricia Lem  
+33 (0)5 17 06 96 13



Genotyping Unit  
Arnaud Remay  
+33 (0)5 17 06 96 17

## Contacts SEV :



Head of SEV  
Fabien Masson  
+33 (0)2 41 22 85 91

### SEV Customer Service



Céline Delarue  
+33 (0)2 41 22 86 00  
(field trials)



Christelle GODIN  
+33 (0)2 41 22 86 93  
(Denomination tests)

# Supply of samples to the SNES

The following information, listed on the SNES order form, is essential for processing seed samples:

- Treated seed and trade name of product. No treated sample will be accepted for analysis without this information.
- Thousand Seed Weight (TSW). This information is necessary to calculate the weight of sub-samples for bacteriology, mycology and virology. If this information is not indicated, it will be invoiced.
- Sample size. Unless indicated differently, the sample size to be provided is expressed in number of seeds.

The sample size indicated is the minimum size set by the method (larger sizes can be offered).

If you do not have the quantity requested and wish to have the analysis done on all the seeds sent, you must indicate this in your request.

Otherwise, the analysis will be put on hold, and we will contact you. You can then:

- send a new sample
- give us your agreement to carry out the analysis on all the seeds supplied.

Please take care to send your seeds in anonymous boxes and/or paper sachets without any labels or commercial names.

The analyses are not performed on GMO samples.

If you wish to make an analysis that is not listed in the price list (species, particular methods, etc.), contact Customer Services who will define with you the work that is adapted to your needs, the feasibility and the cost.



## PHYSICAL AND PHYSIOLOGICAL QUALITY

The SNES always works in compliance with the ISTA Rules, offering the same level of reliability of results, whatever the final certificate requested.

**Physical quality:** provide the minimum weights prescribed by the ISTA Rules, chapter 2.5.4.5. If a counting analysis is requested, provide the weight listed in table 2C column 3. If more than one counting analysis is requested on the same submitted sample, provide the quantities required to perform all the countings.

If only a purity test is requested, provide the seed quantities for the submitted sample according to the following table:

Weight of working sample for purity analysis alone (Table 2C column 4)	Minimum weight of submitted sample for purity analysis (Table Column 4)
Between 500g and 1000g	Minimum working sample weight for purity analysis + 100g
Under 500g	2,5 times the minimum weight of the working sample for purity analysis.

For moisture analysis, the maximum time for receiving the submitted samples is 14 days after seed lot sampling.

**Physiological quality:** Germination test is carried out on a sample of 400 seeds in accordance with the ISTA Rules. Tests on 200 or 100 seeds are also possible depending on the need for precision. The precision of analyses is indicated in the ISTA tolerance tables.

If a germination test is requested without any specific purity analysis, pure seeds are sorted before the germination test. This analysis is not invoiced except for Grasses (*Poaceae*). This step is an integral part of the ISTA method for the evaluation of germinative faculty.

Quantity to provide for substrate checks (the retest is included in the quantities):

	Top of paper	Rolled	Pleated paper	Sand	Organic growing media
GE-SUB-1	20 sheets	12 sheets	12 sheets	10 kg	8 kg
GE-SUB-2	20 sheets	10 sheets	10 sheets	1 kg	1 kg
GE-SUB-3	16 sheets	10 sheets	2 sheets	1 kg	1 kg
GE-SUB-4	96 sheets	16 sheets	16 sheets	20 kg	10 kg



# Supply of samples to the SNES



## SEED HEALTH

Please provide one sample per test requested with the corresponding quantity.

For OIC request, an ISTA method will be chosen if it exists.

**Virology:** Certain types of treatment may affect the analysis, seeds should therefore be sent untreated. If seeds has been treated with a virucidal product, please indicate this information on your order form.

### Mycology:

This test is performed by detection on medium according to the following criteria:

- Without superficial disinfection for most species. If the presence of saprophytes is too high the result will be "undetermined", a new test with superficial disinfection will be proposed.
- With superficial disinfection for species that are known to have saprophytes that can compromise the analysis.

For treated seeds, a test without superficial disinfection is indicated in the price list and will be chosen.

As the method allows the detection of several pathogens simultaneously, the main pathogens are in bold in this price list and will always be indicated on the certificate. For pathogens not in bold they will be indicated on the certificate if their presence is high (> 5%) or if they were asked when the analyses were requested.

For any request for detection of other fungi, please contact SNES.

The nomenclature of fungi evolves; we therefore modify the names of pathogens to follow it. We will indicate any pathogen synonyms in brackets in the price list and test results.

In the nomenclature, "sp." means "unidentified species", "spp." means "all species" and the preceding name is the genus. If we cannot determine the species we will give as result the genus name followed by "sp.".

The denomination as sections has become obsolete, so the detection of *Fusarium*, apart from the identification (PA-ID-FUS), will be done by section classification. Some species-specific *Fusarium* will remain denominated with the species name (e.g. *F. oxysporum* on cucurbits).

Sections correspond to the classification of Nelson *and al.* ; 1983, amended by Burgess *and al.* ; 1994 and updated with molecular techniques (Leslie et Summerell ; 2006, Carter *and al.* ; 2000, Aoki et O'Donnel ; 1999, Benyon *and al.* ; 2000).

Former name	Current sections	Main species
<i>Fusarium roseum</i>	<i>Roseum</i>	<i>F. avenaceum</i>
	<i>Discolor</i>	<i>F. culmorum</i> , <i>F. graminearum</i> ( <i>Gibberella zeae</i> ), <i>F. sambucinum</i> , <i>F. crookwellense</i>
	<i>Arthrosporiella</i>	<i>F. incarnatum</i> ( <i>Fusarium semitectum</i> )
<i>Fusarium</i> sp.	<i>Sporotrichiella</i>	<i>F. poae</i> , <i>F. tricinctum</i> ( <i>Gibberella tricincta</i> ), <i>F. sporotrichioides</i> , <i>F. langsethiae</i>
	<i>Gibbosum</i>	<i>F. equiseti</i> ( <i>Gibberella intricans</i> ), <i>F. acuminatum</i> ( <i>Gibberella acuminata</i> )
<i>Fusarium moniliforme</i>	<i>Liseola</i> ou complexe G. <i>fujikuroi</i>	<i>Gibberella fujikuroi</i> ( <i>F. verticillioides</i> , <i>F. subglutinans</i> ), <i>F. proliferatum</i>
<i>Fusarium oxysporum</i>	<i>F. elegans</i>	<i>F. oxysporum</i>
<i>Fusarium solani</i>	<i>Martiella</i> - <i>Ventricosum</i>	<i>F. solani</i>



# Order an analysis

To SNES	
For GEVES or COFRAC certificate <sup>1</sup>	
	Price
<b>By paper order form</b>	
Handling of the request per submitted sample and issuing of a definitive GEVES or COFRAC certificate, in French or English.	9.70
<b>By internet on DSN website</b>	
Handling of the request per submitted sample and issuing of a definitive GEVES or COFRAC certificate, in French or English.	7.40
<b>Specific handling</b>	
Handling of the request per submitted sample sent in several packaging or weighing more than 2 kg requiring the preparation of a working sample, and issuing of a definitive SNES or COFRAC certificate, in French or English.	41.20
<b>Supplementary certificates, specific presentation of results, priority</b>	
Duplicate certificate for adding manual singature and buffer, in French or English.	NEW 3.10
Summary table of results, or specific presentation of results.	31.50
Raw results on .csv file (request must be entered online on DSN website).	0.00
Priority processing, per sample.	18.90

<sup>1</sup> A GEVES certificate is issued by default, except for COFRAC accredited tests for which a COFRAC certificate will be issued.

For an international certificate	
	Price
<b>By paper order form</b>	
Handling of each submitted sample and issuing of an Orange or Blue International Certificate, in French or English, with priority being given to the related analyses. (EC-01 + SCLI-URBI + BU-ABIODE/BU-ABIBDE)	39.00
<b>Supplementary certificates and request for changes</b>	
Provisional international certificate, in French or English.	10.40
Duplicate international certificate, in French or English.	10.40
Adding additional certificates or modification of information on an international certificate (after checking the conformity with ISTA rules).	34.00

To BioGEVES	
Handling and results	
	Price
<b>Handling</b>	
Handling of the sample for treated seeds.	57.00
<b>Results</b>	
Duplicates analysis certificate except photography.	2.80
New edition of result certificate.	28.10
Specific presentation of results - Contact BioGeves.	/

## SEED QUALITY

### Physiological quality

		Size	Duration	Price
<b>Complementary determinations in addition to the germination test</b>				
Detailed description of seedlings and seeds on 400 seeds.	GE-FG-DET	1 250	/	41.60
Detailed description of seedlings and seeds on 200 seeds.	GE-FG-DET2	500	/	20.80
Percentage of a particular type of seedling.	GE-FG-PCPL	/	/	23.10
Provision of the result of repetitions.	GE-FG-REP	/	/	13.40
<b>Additional testing time required</b>				
Additional duration of 7 days for a germination test on 400 seeds.	GE-FG-7S4	1 250	/	16.20
Additional duration of 14 days for a germination test on 400 seeds.	GE-FG-14S4	500	/	32.60
Additional duration of 7 days for a germination test on 200 seeds.	GE-FG-7S2	500	/	8.20
Additional duration of 14 days for a germination test on 200 seeds.	GE-FG-14S2	500	/	16.30
<b>Verification of species</b>				
Verification of species after germination test.	GE-ENR	/	/	9.40
Verification of species on pelleted seeds, when only a purity test is requested.	GE-VERIF <b>NEW</b>	/	/	24.00
<b>Tetrazolium viability test (excluding ornamental and fruit species) - For results within a week, reception of seeds on Tuesday at the latest.</b>				
Tetrazolium test on 400 seeds.	GE-TZ-1	500	/	174.00
Tetrazolium test on 200 seeds.	GE-TZ-2	300	/	116.00
Tetrazolium test on 100 seeds.	GE-TZ-3	200	/	81.00
<b>Energy</b>				
Germination energy (intermediate counting; germination capacity supplement). The date of counting for the energy varies according to the species.	GE-EG	500	/	19.90
<b>Vigour tests</b>				
Cold-test on 400 seeds.	GE-CO	1 250	/	69.00
Cold-test on 200 seeds.	GE-CO2	500	/	44.30
Accelerated ageing of 200 seeds including germination capacity.	GE-VIEI-2	500	/	90.00
Controlled deterioration of 200 seeds including germination capacity.	GE-DET-1	500	/	90.00
Conductivity test on 200 seeds on ISTA species. <i>The moisture content of seeds should be between 10 and 14 %, sample must be send in a sealed foil sachet with the indication of the water content, otherwise it would be determined by us before the test and invoiced (see test TE-SN-01).</i>	GE-CON-GLO	500	/	57.00
Additional cost for a conductivity test on a treated seed sample.	GE-CON-SUP	/	/	5.40
<b>Treatment of seeds</b>				
Treatment of seeds to be performed by SNES. Seeds do not undergo fungicide treatment before the germination test unless specifically requested (except for Beet).	GE-TRAIT	/	/	23.10
<b>Substrate checks</b>				
Determination of the water holding capacity of a substrate including moisture content.	GE-SUB-1	See p.7	/	92.00
Determination of the pH of a substrate.	GE-SUB-2	See p.7	/	59.00
Determination of the conductivity of a substrate.	GE-SUB-3	See p.7	/	59.00
Assessment of the innocuity of a substrate (determination of the % of seedlings intoxicated by the substrate, on 2 sensitive species).	GE-SUB-4	See p.7	/	134.00
Viability determination of seeds in a soil or a substrate.	GE-SUB-5		Contact SNES	
<b>Automated germination kinetics by image analysis</b>				
Germination kinetics by image analysis (average rate of germination, kinetic curve).	GE-CI		Contact SNES	
Supply of detailed data on imbibition and early elongation of the root.	GE-CI-4		Contact SNES	
Supply of seeds images during germination.	GE-CI-5		Contact SNES	

### Seed health - Prior operations

		Size	Duration	Price
Thousand Seed Weight (TSW), if not indicated on the request for bacteriology, mycology and virology tests.	PA-MMS	/	/	33.00

Bacteriology - Uncoated seeds only				
		Size	Duration	Price
<b>Supplement fee for counting of colonies</b>				
1 pathogen in 5 000 seeds.	PA-BA-19 <b>NEW</b>	5 000	/	25.00
1 pathogen in 30 000 seeds.	PA-BA-20	30 000	/	61.00
More than 1 pathogen in 5 000 seeds.	PA-BA-81	5 000	/	39.00
More than 1 pathogen in 30 000 seeds.	PA-BA-82	30 000	/	114.00

Mycology - See p.8 "Seed health"				
		Size	Duration	Price
<b>Fusarium spp.</b>				
Identification of <i>Fusarium</i> species in addition to detection test.	PA-ID-FUS	/	19 days	265.00
<b>Verticillium dahliae</b>				
Agar method.	PA-ES-VERT	400	19 days	106.00
<b>Supplement for spore counting, washing methods</b>				
Counting by classes (0;1-10;11-100;>100).	PA-MY-DCLA	/	/	64.00
Counting by unit.	PA-MY-DEN	/	/	105.00

Nematology				
		Size	Duration	Price
<b>Heterodera group schachtii, Heterodera group goettingiana, Heterodera group avenae.</b>				
Detection and identification on soil samples.	PA-NE-SOL1	300 g	30 days	175.00

Other tests				
		Size	Duration	Price
Resistance of fungal isolates to fungicides.	PA-AD-01		Contact SNES	
Study of the efficacy of seed disinfection/treatment products on medium or by bioassay.	PA-AD-02		Contact SNES	
Identification of pathogens isolated and provided on medium - Supply 2 boxes/isolates.	PA-AD-IP	/	19 days	50.00
Isolation of strains from symptoms.	PA-ISOLEM	/	/	50.00
Isolation of strains from seeds.	PA-ISOSEM	/	/	107.00
Identification of pathogens on plant material.	PA-DI-PEC		Contact SNES	
Feasibility on a case-by-case basis. <b>Prices below are indicated for information. They will be charged depending on the observed symptoms.</b>				
Handling of the sample.	PA-DI-PEC	/	/	57.00
Identification based on symptoms.	PA-DI-MICR	/	/	98.00
Mycological identification after incubation.	PA-DI-MY	/	/	200.00
Bacteriological identification after incubation.	PA-DI-BA	/	/	100.00
Confirmation by pathogenicity test.	PA-DI-PP	/	/	122.00
Virological identification by immunological test.	PA-DI-ELIS	/	/	215.00
Virological identification virologic by biotest.	PA-DI-IND	/	/	69.00
Analytical Profile Index (API).	PA-DI-API	/	/	190.00
PCR.	PA-DI-PCR	/	/	121.00

EVALUATION OF VARIETIES				
Determination of the identity and the varietal purity				
		Size	Duration	Price
Standard protocol.	SEV-CV	/	/	345.00
Specific study.	SEV-CV1		Contact SEV	

Genotyping by molecular biology				
		Size	Duration	Price
Varietal identity control - SSR.	BI-G-BM-SSR-CID-1		Contact BioGEVES	
Varietal comparison - SSR.	BI-G-BM-SSR-COMP		Contact BioGEVES	



## Genotyping by molecular biology

		Size	Duration	Price
Genetic purity analysis - SSR - 180 seeds.	BI-G-BM-SSR-PU-180		Contact BioGEVES	
Genetic purity analysis - SSR - 8 x 10 seeds.	BI-G-BM-SSR-PUR-10		Contact BioGEVES	
Seed mixture detection.	BI-G-BM-SSR-PUR-40		Contact BioGEVES	
Varietal purity analysis - SSR - 90 seeds.	BI-G-BM-SSR-PUR-90		Contact BioGEVES	
Varietal description - SSR.	BI-G-BM-SSR-DVAR		Contact BioGEVES	
DNA extraction.	BI-G-BM-EXT		Contact BioGEVES	
Varietal identity control - SNP.	BI-G-BM-SNP-CID		Contact BioGEVES	
Hybrid Conformity - SNP.	BI-G-BM-SNP-CONF		Contact BioGEVES	
Varietal comparison - SNP.	BI-G-BM-SNP-COMP		Contact BioGEVES	
Genetic purity analysis - SNP.	BI-G-BM-SNP-PUR		Contact BioGEVES	
Varietal description - SNP.	BI-G-BM-SNP-DVAR		Contact BioGEVES	
Standardization of DNA concentration & distribution in plate.	BI-G-CUST-GEN-3		Contact BioGEVES	
Analysis of genetic diversity.	BI-G-CUST-GEN-2		Contact BioGEVES	
Migration run - Capillary sequencer - plate.	BI-G-BM-RUN		Contact BioGEVES	
DNA assay.	BI-G-BM-DOS		Contact BioGEVES	
Development of genotyping method.	BI-G-METH		Contact BioGEVES	
Customised genotyping.	BI-G-CUST		Contact BioGEVES	

## Technological quality: biochemical tests

		Size	Duration	Price
SPEC - custom analysis.	BI-B-CUST-DEV-SPEC		Contact BioGEVES	
RMN - custom analysis.	BI-B-CUST-DEV-RMN		Contact BioGEVES	
CPG - custom analysis.	BI-B-CUST-DEV-CPG		Contact BioGEVES	
NIRS - custom analysis.	BI-B-CUST-DEV-NIRS		Contact BioGEVES	
HPLC - custom analysis.	BI-B-CUST-DEV-HPLC		Contact BioGEVES	
Tannin content (assay by spectrophotometry).	BI-B-SPEC-TAN-GEN		Contact BioGEVES	
Fatty acid composition.	BI-B-CPG-AG-GEN		Contact BioGEVES	
Glucosinolate content (HPLC).	BI-B-HPLC-GLU-GEN		Contact BioGEVES	
Antitrypsic activity.	BI-B-SPECT-FAT-GEN		Contact BioGEVES	
Glucosinolate content (NIRS).	BI-B-NIRS-NGLS		Contact BioGEVES	
Spectrochlorophyll.	BI-B-SPEC-CHLO		Contact BioGEVES	
Customised biochemical molecule assays (NIRS model development, analytical chemistry...).	BI-B-CUST		Contact BioGEVES	
Oil content (NMR).	BI-B-RMN-H		Contact BioGEVES	
Water content (NMR).	BI-B-RMN-E		Contact BioGEVES	
Phytates by spectrophotometry.	BI-B-SPEC-PHY <b>NEW</b>		Contact BioGEVES	

## Other tests

		Size	Duration	Price
WDV virus detection test by PCR.	BI-D-VIR-WDV		Contact BioGEVES	

## Annual subscription to the variety denomination class test

			Price
All species - 10 tests.	SEV-DENOS-10		215.00
All species - 20 tests.	SEV-DENOS-20		405.00
All species - 50 tests.	SEV-DENOS-50		950.00
All species - 100 tests.	SEV-DENOS-100		1830.00
All species - 200 tests.	SEV-DENOS-200		3580.00

## PUBLICATIONS (Contact SNES)

### Technical sheet for analysis of specific purity and counting of all other seeds

Purity and determination of other seeds by number: methodology.

AP-M-1

<b>Identification data sheet of seeds and other impurities</b>	
<i>Echinochloa crus-galli</i> , <i>Echinochloa colona</i> , <i>Panicum capillare</i> , <i>Panicum maximum</i> , <i>Setaria pumila</i> , <i>Setaria veridis</i> .	AP-A-01
<i>Avena fatua</i> - <i>Avena sativa</i> .	AP-A-02
<b>Germination analysis method sheet</b>	
Germination method of different species.	GE-M-ESP
<b>Identification data sheet of seeds and other impurities</b>	
Polygonaceae ( <i>Persicaria maculosa</i> , <i>Persicaria lapathifolia</i> , <i>Fallopia convolvulus</i> , <i>Polygonum aviculare</i> , <i>Rumex</i> sp., <i>Rumex acetosella</i> , <i>Rumex maritimus</i> ).	AP-A-03
<i>Chenopodium</i> sp., <i>Atriplex</i> sp., <i>Amaranthus</i> sp., <i>Reseda</i> sp., <i>Myosotis</i> sp.	AP-A-04
Asteraceae ( <i>Anthemis arvensis</i> , <i>Glebionis segetum</i> , <i>Chicorium</i> sp., <i>Tripleurospermum inodorum</i> , <i>Helminthotheca echioïdes</i> , <i>Lapsana communis</i> , <i>Lactuca sativa</i> , <i>Sonchus</i> spp., <i>Cirsium arvense</i> , <i>Cirsium vulgare</i> , <i>Centaurea cyanus</i> ).	AP-A-06
<i>Cuscuta</i> spp.	AP-P-1
<i>Claviceps purpurea</i> - <i>Sclerotinia sclerotiorum</i> .	AP-P-2
<b>Self-control kit</b>	
On request, components are sent separately accompanied with an instructional material. Contact SNES.	KIT-AUTO
<b>I.D.Seed® On-line picture library, an aid to the identification of seeds - In French</b>	
I.D.Seed® - Complete collection. Resgistration on <a href="http://mediatheque.geves.fr">http://mediatheque.geves.fr</a>	IDSEED-1
<b>Identification data sheet of fungal pathogens</b>	
<i>Altenaria linariae</i> , <i>A. alternata</i> , <i>A. brassicae</i> , <i>A. brassicicola</i> , <i>A. cucumerina</i> , <i>A. dauci</i> , <i>A. japonica</i> , <i>A. linicola</i> , <i>A. padwickii</i> , <i>A. petroselini</i> , <i>Alternariaster helianthi</i> , <i>Ascochyta medicaginicola</i> , <i>Bipolaris oryzae</i> , <i>Botryotinia squamosa</i> , <i>Botrytis cinerea</i> , <i>Ciborinia allii</i> , <i>Colletotrichum graminicola</i> , <i>C. truncatum</i> , <i>Complexe Phomopsis</i> , <i>Didymella pisi</i> , <i>Exserohilum turcicum</i> , <i>Itersonilia perplexans</i> , <i>Phomopsis helianthi</i> , <i>Sarocladium strictum</i> , <i>Sclerotinia sclerotiorum</i> .	PA-T-PATH
<b>Identification data sheet of nematodes</b>	
<i>Ditylenchus dipsaci</i> , <i>D. destructor</i> , <i>Aphelenchoides besseyi</i> , <i>A. fragariae</i> .	PA-T-NEM
<b>Identification data sheet of fungal saprophytes</b>	
Sheet containing the main fungal saprophytes present in analysis on media.	PA-T-SAPR

## SEED QUALITY

### Physical quality

		Size	Duration	Price
<b>Calibration - Provide seeds in watertight bag</b>				
ISTA method (Denker device): inferior or equal to 6 grills. <b>Provide a 250g watertight sample for naked seeds or 25,000 coated seeds.</b>	MN-DK-CAL1	/	/	41.60
ISTA method (Denker device): superior or equal to 6 grills. <b>Provide a 250g watertight sample for naked seeds or 25,000 coated seeds.</b>	MN-DK-CAL2	/	/	54.00
<b>Thousand-seed weight (on purity test performed by SNES)</b>				
Thousand-seed weight on pure seeds.	MMS-01	/	/	33.00
<b>Purity analysis test</b>				
Purity - <b>Beets, Chicory.</b>	PU-IS-18	ISTA weight	/	33.20
Percentage of a specific type of other seeds. <b>Specify the search to be performed.</b>	PU-CONS1	/	/	9.00
Percentage of a specific type of inert materials. <b>Specify the search to be performed.</b>	PU-CONS2	/	/	9.00
Supplement for purity analysis if received as raw seeds.	PU-LB-SUP		Contact SNES	
<b>Counting of all other seeds</b>				
Full counting - <b>Beets, Chicory.</b>	SP-IS-17	ISTA weight	/	138.00
Counting of other seeds on purity weight. Indication of the number of other seeds in the specific purity test.	PU-SP-01	/	/	13.40
<b>Limited counting of all other seeds</b>				
Searching of 1 to 4 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-01	ISTA weight	/	64.00
Searching of 5 to 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-02	ISTA weight	/	102.00
Searching of more than 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-20		Contact SNES	
Searching of <i>Orobanche</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO	ISTA weight	/	75.00
Searching of <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-STRIGA	ISTA weight	/	75.00
Searching of <i>Orobanche</i> sp. and <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO-STR	ISTA weight	/	110.00
<b>Tests on coated seeds</b>				
Purity on coated seeds.	PU-IS-21	2 500	/	34.30
Pelleting material removal and full counting on 2 500 coated seeds. <b>Only on UNTREATED seeds.</b>	SP-ENR2500	2 500	/	102.00
Pelleting material removal and full counting on 7 500 coated seeds. <b>Only on UNTREATED seeds.</b>	SP-ENR-TOT	7 500	/	309.00
Pelleting material removal and limited counting of other seeds from 1 to 3 botanical species, on 7 500 coated seeds. <b>Only on UNTREATED seeds.</b>	SP-ENR-LIM	7 500	/	242.00
<b>Moisture content - Provide seeds in watertight bags from which as much air as possible has been extracted</b>				
Oven method.	TE-SN-01	ISTA weight	/	20.70
<b>Identification of individual seeds</b>				
Visual identification by species.	ID-IS-01	/	/	34.60

### Physiological quality

		Size	Duration	Price
<b>Germination test on 400 seeds</b>				
Beets (after washing and treatment).	GE-FG-03-4	1 250	/	72.00
Beets (pelleted seeds).	GE-FG-034E	1 250	/	55.00
Chicorys.	GE-FG-18-4	1 250	/	65.00
<b>Germination test on 200 seeds</b>				
Beets (after washing and treatment).	GE-FG-03-2	500	/	56.00
Beets (pelleted seeds).	GE-FG-032E	500	/	38.60
Chicorys.	GE-FG-18-2	500	/	52.00
<b>Germination test on 100 seeds</b>				
Beets (after washing and treatment).	GE-FG-03-1	500	/	36.00
Beets (pelleted seeds).	GE-FG-031E	500	/	27.70



# Beets - Chicorys - Potatoe

Physiological quality				
		Size	Duration	Price
<b>Germination test on 100 seeds</b>				
Chicorys.	GE-FG-18-1	500	/	31.30
<b>Cold test germination on 400 seeds</b>				
Beets (after washing and treatment).	GE-EGFG-B4	1 250	/	104.00
Chicorys.	GE-EGFG-4	1 250	/	92.00
<b>Cold test germination on 200 seeds</b>				
Beets (after washing and treatment).	GE-EGFG-B2	500	/	63.00
Chicorys.	GE-EGFG-2	500	/	54.00
<b>Verification of species</b>				
Verification of species after germination test.	GE-ENR	/	/	9.40
<b>Additional determinations in addition to the germination test on 400 seeds</b>				
Percentage of monogerm seed - Monogerm seeds.	GE-FG-MONO	/	/	13.60
Percentage of monogerm seed - Multigerms seeds.	GE-FG-MONO1	/	/	29.80
Germination based on full seeds.	GE-FG-AMAN	/	/	10.00
<b>Additional determinations in addition to the germination test on 200 seeds</b>				
Percentage of monogerm seed - Monogerm seeds.	GE-FG-MON2	/	/	8.20
Percentage of monogerm seed - Multigerms seeds.	GE-FG-MON21	/	/	17.70

Bacteriology - Uncoated seeds only				
		Size	Duration	Price
<b>Swiss chard</b>				
<b><i>Pseudomonas syringae</i> pv. <i>aptata</i></b>				
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-119	30 000	30 days	261.00

Mycology - See p.8 "Seed health"				
		Size	Duration	Price
<b>Beet</b>				
<b><i>Phoma betae</i> (<i>Neocamarosporium betae</i>), <i>Colletotrichum dematium</i>, <i>Fusarium oxysporum</i>, <i>Fusarium equiseti</i>, <i>Fusarium</i> (other sections), <i>Verticilium</i> sp.</b>				
Agar method.	PA-ES-BET	400	19 days	106.00
<b><i>Peronospora farinosa</i> (downy mildew)</b>				
Seed wash method. UNTREATED seeds only.	PA-MI-BET	500	15 days	102.00
<b><i>Cercospora beticola</i> (leaf spot)</b>				
Seed wash method. UNTREATED seeds only.	PA-CE-BET	500	15 days	102.00
<b><i>Uromyces betae</i> (rust)</b>				
Seed wash method. UNTREATED seeds only.	PA-RO-BET	500	15 days	102.00
<b><i>Ramularia beticola</i> (leaf spot)</b>				
Seed wash method. UNTREATED seeds only.	PA-RAM-BET	500	15 days	102.00
<b>Chicory</b>				
<b><i>Alternaria cichorii</i>, <i>Fusarium</i> (all sections), <i>Botrytis cinerea</i></b>				
Agar method.	PA-ES-CHI	400	19 days	106.00

Nematology				
		Size	Duration	Price
<b><i>Heterodera</i> group <i>schachtii</i>, <i>Heterodera</i> group <i>goettingiana</i>, <i>Heterodera</i> group <i>avenae</i>.</b>				
Detection and identification on soil samples.	PA-NE-SOL1	300 g	30 days	175.00

Virology - Uncoated seeds only				
		Size	Duration	Price
<b>Beet</b>				
<b><i>Tomato black ring virus</i> (TBRV)</b>				
ELISA.	PA-VI-37	2 000	16 days	205.00

## Virology - Uncoated seeds only

		Size	Duration	Price
<b>Beet</b>				
<b>Tobacco rattle virus (TRV)</b>				
ELISA.	PA-VI-82	/	/	258.00

## EVALUATION OF VARIETIES

### Varietal resistance

		Size	Duration	Price
<b>Beet</b>				
<b>Heterodera schachtii</b>				
GEVES protocol.	PA-R-BET	75	/	1026.00
<b>Aphanomyces cochlioides</b>				
Official protocol.	PA-R-BET-1		Contact SNES	
<b>Rhizoctonia solani</b>				
Evaluation of aggressivity of an isolate.	PA-R-BET-2		Contact SNES	
<b>Potato</b>				
<b>Globodera pallida</b> <sup>40</sup>				
Counting of eggs and larvae for resistant varieties. Directive 2007/33/CE.	PA-R-POM-1	8	/	856.00
Foot test (miniaturised test: 4 tubercules).	PA-R-POM-5		Contact SNES	
<b>Globodera rostochiensis</b> <sup>40</sup>				
Counting of eggs and larvae for resistant varieties. Directive 2007/33/CE.	PA-R-POM-3	8	/	825.00
Foot test (miniaturised test: 4 tubercules).	PA-R-POM-6		Contact SNES	

Different prices outside test periods. Contact SNES for information on the periods according to the species.

## Technological quality: biochemicals tests

		Size	Duration	Price
<b>Chicory</b>				
Asparagin content.	BI-B-SPEC-ASN		Contact BioGEVES	
<b>Beet</b>				
Betanine (red of beetroot) assay by spectrophotometry.	BI-B-SPEC-BET		Contact BioGEVES	

## Other tests

		Size	Duration	Price
Multiplex RT-qPCR for the identification of 4 viruses: BtMV, BYV, BChV, BMYV.	BI-D-VIR-BET	NEW	Contact BioGEVES	

## Field tests by SEV

		Price
DUS testing - <b>Sugar beet</b> .	SEV-DHS-BETS	1090.00
DUS testing - <b>Forage beet</b> .	SEV-DHS-BETF	1090.00
DUS testing - <b>Chicory</b> .	SEV-DHS-CHI	1090.00
Resistance test for leaf blight and tuber blight for <b>Potato</b> . Contact aurelie.mailliard@geves.fr	SEV-PDT-MIL	1460.00

## PUBLICATIONS (Contact SNES)

### Germination analysis technical sheet

Evaluation of <b>Beet</b> seedlings.	GE-T-BET
--------------------------------------	----------

### Technical sheet for analysis of specific purity and counting of all other seeds

<i>Beta vulgaris</i> .	AP-C-9
------------------------	--------

### Identification data sheet of seeds and other impurities

Asteraceae ( <i>Anthemis arvensis</i> , <i>Glebionis segetum</i> , <i>Chicorium</i> sp., <i>Tripleurospermum inodorum</i> , <i>Helminthotheca echinoides</i> , <i>Lapsana communis</i> , <i>Lactuca sativa</i> , <i>Sonchus</i> spp., <i>Cirsium arvense</i> , <i>Cirsium vulgare</i> , <i>Centaurea cyanus</i> ).	AP-A-06
--	---------



Collection of seeds

Weed’s identification for *Beta vulgaris* analysis.

APCS-BET-V



## SEED QUALITY

## Physical quality

		Size	Duration	Price
<b>Thousand-seed weight (on purity test performed by SNES)</b>				
Thousand-seed weight on pure seeds.	MMS-01	/	/	33.00
<b>Purity analysis test</b>				
Purity - Field bean, Faba bean, Lupin, Pea.	PU-IS-02	ISTA weight	/	25.80
Percentage of a specific type of other seeds. <b>Specify the search to be performed.</b>	PU-CONS1	/	/	9.00
Percentage of a specific type of inert materials. <b>Specify the search to be performed.</b>	PU-CONS2	/	/	9.00
Supplement for purity analysis if received as raw seeds.	PU-LB-SUP		Contact SNES	
<b>Counting of all other seeds</b>				
Full counting - Field bean, Faba bean, Lupin, Pea.	SP-IS-02	ISTA weight	/	25.80
Counting of other seeds on purity weight. Indication of the number of other seeds in the specific purity test.	PU-SP-01	/	/	13.40
<b>Limited counting of all other seeds</b>				
Searching of 1 to 4 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-01	ISTA weight	/	64.00
Searching of 5 to 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-02	ISTA weight	/	102.00
Searching of more than 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-20		Contact SNES	
Searching of <i>Avena fatua</i> - Pea.	SP-AF-3KG2	3 kg	/	67.00
Searching of <i>Orobanche</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO	ISTA weight	/	75.00
Searching of <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-STRIGA	ISTA weight	/	75.00
Searching of <i>Orobanche</i> sp. and <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO-STR	ISTA weight	/	110.00
<b>Moisture content - Provide seeds in watertight bags from which as much air as possible has been extracted</b>				
Oven method.	TE-SN-01	ISTA weight	/	20.70
Supplement for moisture content test requiring pre-drying.	TE-SN-03	/	/	13.40
<b>Determination of bitterness</b>				
Bitter on Lupin.	AMER-LUP1	400	/	67.00
<b>Identification of individual seeds</b>				
Visual identification by species.	ID-IS-01	/	/	34.60

## Physiological quality

		Size	Duration	Price
<b>Germination test on 200 seeds</b>				
Faba bean, Lupin, Pea, Soybean.	GE-FG-02-2	500	/	45.70
<b>Germination test on 400 seeds</b>				
Faba bean, Lupin, Pea, Soybean.	GE-FG-02-4	1 250	/	55.00
<b>Vigour tests</b>				
Conductivity test on 200 seeds on ISTA species. <i>The moisture content of seeds should be between 10 and 14 %, sample must be send in a sealed foil sachet with the indication of the water content, otherwise it would be determined by us before the test and invoiced (see test TE-SN-01).</i>	GE-CON-GLO	500	/	57.00
Additional cost for a conductivity test on a treated seed sample.	GE-CON-SUP	/	/	5.40
Accelerated ageing of 200 seeds including germination capacity.	GE-VIEI-2	500	/	90.00

## Bacteriology - Uncoated seeds only

		Size	Duration	Price
<b>Pea - Detection of 1 pathogen</b>				
<b><i>Pseudomonas syringae</i> pv. <i>pisii</i> (Psp)</b>				
Agar method + pathogenicity test in case of suspect colonies (method derived from Anses BHs/99/03).	PA-BA-21	5 000	26 days	196.00

Bacteriology - Uncoated seeds only

		Size	Duration	Price
<b>Pea - Detection of 1 pathogen</b>				
<b><i>Pseudomonas syringae</i> pv. <i>pisi</i> (Psp)</b>				
Agar method + pathogenicity test in case of suspect colonies (method derived from Anses BHs/99/03).	PA-BA-70	15 000	26 days	292.00
Agar method + pathogenicity test in case of suspect colonies (ISTA 7-029).	PA-BA-21-1	5 000	32 days	240.00
<b><i>Pseudomonas syringae</i> pv. <i>syringae</i> (Pss)</b>				
Agar method + pathogenicity test in case of suspect colonies (Anses BHs/99/03).	PA-BA-22	5 000	32 days	215.00
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-84	15 000	32 days	292.00
<b>Pea - Detection of 2 pathogens</b>				
<b>Psp + Pss</b>				
Agar method + pathogenicity test in case of suspect colonies (Anses BHs/99/03).	PA-BA-22-2	5 000	36 days	249.00
	PA-BA-85	15 000	36 days	378.00
<b>Pea - Supplement fee pathogenicity test</b>				
<b><i>Pseudomonas syringae</i> pv. <i>pisi</i></b>				
Confirmation by pathogenicity test PCR positive isolates.	PA-PP-PSP	/	9 days	78.00
<b>Soybean</b>				
<b><i>Pseudomonas savastanoi</i> pv. <i>glycinea</i></b>				
Agar method + pathogenicity test in case of suspect colonies (COFRAC - Anses BHs/99/04).	PA-BA-27	5 000	31 days	215.00

Mycology - See p.8 "Seed health"

		Size	Duration	Price
<b>Faba bean, Field bean</b>				
<b><i>Didymella fabae</i> (<i>Ascochyta fabae</i>), <i>Botrytis cinerea</i>, <i>Botrytis fabae</i>, <i>Fusarium</i> (all sections)</b>				
Agar method.	PA-ES-FEV	400	19 days	106.00
<b>Lupin</b>				
<b><i>Colletotrichum lupini</i>, <i>Botrytis cinerea</i>, <i>Fusarium</i> (other sections), <i>Phomopsis</i> sp.</b>				
Agar method.	PA-ES-LUP	400	19 days	106.00
<b>Pea</b>				
<b><i>Didymella pisi</i> (<i>Ascochyta pisi</i>), <i>Didymella pinodes</i> (<i>Mycosphaerella pinodes</i>), <i>Didymella pinodella</i> (<i>Phoma pinodella</i>), <i>Stemphylium botryosum</i>, <i>Fusarium</i> (other sections), <i>Botrytis</i> sp., <i>Sclerotinia</i> sp., <i>Phoma</i> sp.</b>				
Agar method with superficial disinfection. <b>UNTREATED seeds only.</b>	PA-ES-POID	400	19 days	110.00
Agar method without superficial disinfection. <b>Treated seeds only.</b>	PA-ES-POI	400	19 days	106.00
<b><i>Didymella pisi</i> (<i>Ascochyta pisi</i>)</b>				
Agar method (ISTA 7-005).	PA-ANT-POI	400	19 days	110.00
<b><i>Peronospora viciae</i> (<i>Peronospora pisi</i>) (downy mildew)</b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-MI-POI	500	15 days	102.00
<b>Chickpea</b>				
<b><i>Ascochyta rabiei</i> (<i>Phoma rabiei</i>), <i>Botrytis cinerea</i>, <i>Fusarium oxysporum</i>, <i>Fusarium solani</i>, <i>Fusarium</i> (other sections)</b>				
Agar method with superficial disinfection. <b>UNTREATED seeds only.</b>	PA-ES-POCD	400	19 days	110.00
Agar method without superficial disinfection. <b>Treated seeds only.</b>	PA-ES-POC	400	19 days	106.00
<b>Soybean</b>				
<b><i>Phomopsis complex</i>.</b>				
Possibility of detection out of ISTA scope on request of <i>Fusarium</i> (all sections), <i>Stemphylium botryosum</i> , <i>Colletotrichum dematium</i> , <i>Botrytis</i> sp., <i>Phoma</i> sp.				
Agar method (ISTA 7-016).	PA-PHO-SOJ	400	19 days	113.00

Nematology

		Size	Duration	Price
<b>Faba bean</b>				
<b><i>Ditylenchus dipsaci</i> and/or <i>Ditylenchus gigas</i></b>				
Filtration (COFRAC - Anses MOA013 parts A and B). <b>UNTREATED seeds only.</b>	PA-NE-FEV	300 g	16 days	76.00
Test carried out on the whole submitted sample. <b>If the supplied quantity is too important, a new sample will be requested.</b>				
Detection on plants. Filtration (Anses MOA013 parts A and B).	PA-NE-PLAF	/	16 days	85.00

# Protein crops

## Nematology

### Pea

#### *Ditylenchus dipsaci*

Filtration (COFRAC - Anses MOA013 parts A and B). **UNTREATED seeds only.**  
Test carried out on the whole submitted sample. **If the supplied quantity is too important, a new sample will be requested.**

	Size	Duration	Price
PA-NE-POIS	200 g	16 days	76.00

## Virology - Uncoated seeds only

### Pea

#### *Tomato black ring virus* (TBRV)

ELISA.

	Size	Duration	Price
PA-VI-37	2 000	16 days	205.00

#### *Pea early browning virus* (PEBV)

ELISA (ISTA 7-024).

PA-VI-31	2 000	16 days	205.00
----------	-------	---------	--------

#### *Pea enation mosaic virus* (PEMV)

ELISA.

PA-VI-57	2 000	16 days	249.00
----------	-------	---------	--------

#### *Pea seed borne mosaic virus* (PSbMV)

ELISA (ISTA 7-024).

PA-VI-11	2 000	16 days	173.00
----------	-------	---------	--------

#### *Bean yellow mosaic virus* (BYMV)

ELISA.

PA-VI-60	/	/	271.00
----------	---	---	--------

#### *Bean leaf roll virus* (BLRV)

ELISA.

PA-VI-67	/	/	247.00
----------	---	---	--------

#### *Southern bean mosaic virus* (SBMV)

ELISA.

PA-VI-88	/	/	247.00
----------	---	---	--------

#### *Broad bean true mosaic virus* (BBTMV)

ELISA.

PA-VI-50	/	/	247.00
----------	---	---	--------

### Soybean

#### *Soybean mosaic virus* (SMV)

ELISA.

PA-VI-13	/	/	218.00
----------	---	---	--------

## EVALUATION OF VARIETIES

### Varietal resistance

### Pea

#### *Ascochyta pisi* race C

Official protocol.

	Size	Duration	Price
PA-R-POI-1	30	/	102.00

#### *Fusarium oxysporum* f. sp. *pisii* race 1

Official protocol.

PA-R-POI-2	30	/	114.00
------------	----	---	--------

#### *BYMV* (*Bean yellow mosaic virus*)

Official protocol.

PA-R-POI-3	30	/	106.00
------------	----	---	--------

#### *PEMV* (*Pea enation mosaic virus*)

Official protocol.

PA-R-POI-4	30	/	121.00
------------	----	---	--------

#### *Erysiphe pisi*

Official protocol.

PA-R-POI-5	30	/	170.00
------------	----	---	--------

*Different prices outside test periods. Contact SNES for tests outside periods (March - April)*

## Genotyping by protein profiling

### Soybean

Varietal comparison by isoenzyme electrophoresis.

BI-G-EL-COMP-S	Contact BioGEVES
----------------	------------------

Purity control by iso-enzymatic electrophoresis - 100 seeds.

BI-G-EL-PUR-S-100G	Contact BioGEVES
--------------------	------------------

Description of a variety for 6 loci on 20 seeds.

BI-G-EL-DVAR-S	Contact BioGEVES
----------------	------------------

Purity test of a batch for 6 loci out of 200 seedlings.

BI-G-EL-PUR-S-200G	Contact BioGEVES
--------------------	------------------

# Protein crops

Genotyping by molecular biology					
			Size	Duration	Price
Pea					
Varietal purity analysis - SSR - 90 seeds.		BI-G-BM-SSR-PUR-90		Contact BioGEVES	
Varietal identity control - SSR.		BI-G-BM-SSR-CID-1		Contact BioGEVES	
Soybean					
Varietal purity analysis - SSR - 90 seeds.		BI-G-BM-SSR-PUR-90		Contact BioGEVES	
Varietal identity control - SSR.		BI-G-BM-SSR-CID		Contact BioGEVES	

Technological quality : biochemicals tests				
		Size	Duration	Price
Field Bean, Pea				
Protein content (NIRS).	BI-B-NIRS-P		Contact BioGEVES	
Antitrypsic factors (assay by spectrophotometry).	BI-B-SPEC-FAT		Contact BioGEVES	
Tannin content (assay by spectrophotometry).	BI-B-SPEC-TAN		Contact BioGEVES	
Vicine and convicine content (faba) by high performance liquid chromatography (HPLC).	BI-B-HPLC-VCCV		Contact BioGEVES	
Soybean				
Protein content (NIRS).	BI-B-NIRS-P		Contact BioGEVES	
Antitrypsic factors (assay by spectrophotometry).	BI-B-SPEC-FAT		Contact BioGEVES	

Detection, identification and quatification of GMOs				
		Size	Duration	Price
Soybean				
Detection of the adventitious presence of GMOs in raw products (seeds, grains). List of methods available on request.	BI-D-OGM1		Contact BioGEVES	
Identification and quantification of GMO events. List of methods available on request.	BI-D-OGM3		Contact BioGEVES	

Field tests by SEV		
		Price
DUS testing - <b>Field bean, Lupin.</b>	SEV-DHS-FEVLUP	1355.00
DUS testing - <b>Lentil.</b>	SEV-DHS-LEN	1355.00
DUS testing - <b>Spring peas.</b>	SEV-DHS-POIP	1355.00
DUS testing - <b>Winter peas.</b>	SEV-DHS-POIH	1300.00
DUS testing - <b>Chickpea.</b>	SEV-DHS-POIC	1355.00
DUS testing - <b>Soybean.</b>	SEV-DHS-SOJ	1235.00

PUBLICATIONS (Contact SNES)			
<b>Method sheet</b>			
Vigour testing - Conductivity - <b>Pea.</b>			VIG-2-M
<b>Germination analysis technical sheet</b>			
Evaluation of <b>Pea</b> seedlings.			GE-T-POI
Evaluation of <b>Faba</b> seedlings.			GE-T-FEV
<b>Technical sheet for analysis of specific purity and counting of all other seeds</b>			
<i>Pisum sativum</i> , <i>Vicia faba</i> .			AP-C-8
<i>Cicer arietinum</i> .			AP-C-12
<b>Collection of seeds</b>			
Weed's identification for <i>Pisum sativum</i> and <i>Vicia faba</i> analysis.			APCS-PIS-S

## SEED QUALITY

## Physical quality

		Size	Duration	Price
<b>Thousand-seed weight (on purity test performed by SNES)</b>				
Thousand-seed weight on pure seeds.	MMS-01	/	/	33.00
<b>Purity analysis test</b>				
Purity - Oat, Wheat, Spelt, Barley, Rice, Buckwheat, Rye, Triticale.	PU-IS-01	ISTA weight	/	63.00
Percentage of a specific type of other seeds. <b>Specify the search to be performed.</b>	PU-CONS1	/	/	9.00
Percentage of a specific type of inert materials. <b>Specify the search to be performed.</b>	PU-CONS2	/	/	9.00
Supplement for purity analysis if received as raw seeds.	PU-LB-SUP		Contact SNES	
<b>Counting of all other seeds</b>				
Full counting - Oat, Wheat, Spelt, Barley, Rice, Buckwheat, Rye, Triticale.	SP-IS-01	ISTA weight	/	139.00
Full counting - Soft wheat.	SP-CER-R1	500 g	/	116.00
Counting of other seeds on purity weight. Indication of the number of other seeds in the specific purity test.	PU-SP-01	/	/	13.40
<b>Limited counting of all other seeds</b>				
Searching of 1 to 4 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-01	ISTA weight	/	64.00
Searching of 5 to 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-02	ISTA weight	/	102.00
Searching of more than 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-20		Contact SNES	
Searching of <i>Avena fatua</i> - Wheat, Spelt, Barley, Rice, Rye, Triticale.	SP-AF-3KG1	3 kg	/	195.00
Searching of <i>Avena fatua</i> - Oat.	SP-AF-3KG5	3 kg	/	352.00
Searching of <i>Orobanche</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO	ISTA weight	/	75.00
Searching of <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-STRIGA	ISTA weight	/	75.00
Searching of <i>Orobanche</i> sp. and <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO-STR	ISTA weight	/	110.00
<b>Moisture content - Provide seeds in watertight bags from which as much air as possible has been extracted</b>				
Oven method.	TE-SN-01	ISTA weight	/	20.70
Supplement for moisture content test requiring pre-drying.	TE-SN-03	/	/	13.40
<b>Determination of bitterness</b>				
Bitter on Quinoa.	AMER-QUI	400	/	67.00
<b>Identification of individual seeds</b>				
Visual identification by species.	ID-IS-01	/	/	34.60

## Physiological quality

		Size	Duration	Price	
Germination test on 400 seeds					
Oat, Wheat, Spelt, Barley, Rice, Buckwheat, Rye, Triticale.	GE-FG-01-4	1 250	/	51.00	
Germination test on 200 seeds					
Oat, Wheat, Spelt, Barley, Rice, Buckwheat, Rye, Triticale.	GE-FG-01-2	500	/	41.80	
Vigour test					
Cold Test on 400 seeds.	GE-CO-CE-4	1 250	/	69.00	
Cold Test on 200 seeds.	GE-CO-CE-2	500	/	44.30	
Accelerated ageing of 200 seeds including germination capacity.	GE-VIEI-2	500	/	90.00	
Dormancy evaluation					
Dormancy index for cereal varieties.	GE-IND-DOR	NEW	1 000	21 days	54.00



Mycology - See p.8 "Seed health"

		Size	Duration	Price
<b>Oats</b>				
<b><i>Ustilago avenae</i> (loose smut) and <i>Ustilago hordei</i> (smut)</b>				
Seed wash method.	PA-CH-AV	500	15 days	102.00
UNTREATED seeds only.				
<b><i>Pyrenophora chaetomioides</i> (<i>Helminthosporium avenae</i>), <i>Parastagonospora avenae</i> (<i>Septoria avenae</i>), <i>Microdochium</i> spp., <i>Fusarium</i> (all sections), <i>Botrytis</i> sp.</b>				
Agar method with superficial disinfection. UNTREATED seeds only.	PA-ES-AVD	400	19 days	110.00
Agar method without superficial disinfection. Treated seeds only.	PA-ES-AV	400	19 days	106.00
<b>Wheat, Barley, Rye, Triticale</b>				
<b><i>Tilletia caries</i> (bunt)</b>				
Filtration and counting method + viability measure by staining method.	PA-CA-VIAC	50 g	15 days	133.00
<b>Wheat</b>				
<b><i>Tilletia caries</i>, <i>Tilletia laevis</i> (<i>Tilletia foetida</i>), <i>Tilletia controversa</i> (bunt)</b>				
Filtration and counting method. Provide the specified quantity of seeds with indication the weight and the number of seeds on the bag (information is under the applicant's responsibility). UNTREATED seeds only.	PA-CA-BLE	50 g	15 days	95.00
<b><i>Tilletia indica</i><sup>40</sup>, <i>Tilletia caries</i>, <i>Tilletia laevis</i> (<i>Tilletia foetida</i>), <i>Tilletia controversa</i> (bunt)</b>				
Filtration method (COFRAC - Anses MOA 017). Provide the specified quantity of seeds with indication the weight and the number of seeds on the bag (information is under the applicant's responsibility). Analyses only carried out on seed lots from France. UNTREATED seeds only.	PA-CA-BLE2	200 g	15 days	141.00
<b><i>Tilletia caries</i> (bunt)</b>				
Viability mesure of spores by detection by PCR on plantlets.	PA-CA-VIA2			Contact SNES
Evaluation of the efficiency of treatments. Evaluation of transmission from seed to plantlet.				
<b><i>Ustilago tritici</i> (loose smut)</b>				
Embryo extraction method. UNTREATED seeds only.	PA-CH-BLE	2 000	15 days	110.00
<b><i>Microdochium</i> spp., <i>Fusarium</i> (section <i>Discolor</i>, section <i>Roseum</i>, section <i>Sporotrichiella</i> and other sections), <i>Parastagonospora nodorum</i> (<i>Septoria nodorum</i>), <i>Bipolaris sorokiniana</i> (<i>Helminthosporium sativum</i>), <i>Helminthosporium</i> sp.</b>				
Agar method with superficial disinfection. UNTREATED seeds only.	PA-ES-BLED	400	19 days	110.00
<b><i>Microdochium</i> spp., <i>Fusarium</i> (section <i>Discolor</i>, section <i>Roseum</i>, section <i>Sporotrichiella</i> and other sections), <i>Parastagonospora nodorum</i> (<i>Septoria nodorum</i>), <i>Bipolaris sorokiniana</i> (<i>Helminthosporium sativum</i>), <i>Helminthosporium</i> sp.</b>				
Agar method without superficial disinfection. Treated seeds only.	PA-ES-BLE	400	19 days	106.00
<b><i>Microdochium</i> spp.</b>				
Agar method (ISTA 7-022).	PA-MIC-BLE	400	19 days	109.00
Identification of species by PCR in addition to the analysis of detection.	PA-MIC-BL2	/	19 days	226.00
<b><i>Parastagonospora nodorum</i> (<i>Septoria nodorum</i>)</b>				
Agar method (ISTA 7-014).	PA-SE-BLE	400	19 days	109.00
<b><i>Urocystis agropyri</i> (flag smut)</b>				
Seed wash method. UNTREATED seeds only.	PA-BLE-URO	500	15 days	102.00
<b>Barley</b>				
<b><i>Tilletia caries</i>, <i>Tilletia laevis</i> (<i>Tilletia foetida</i>), <i>Tilletia controversa</i> (bunt)</b>				
Filtration and counting method. Provide the specified quantity of seeds with indication the weight and the number of seeds on the bag (information is under the applicant's responsibility). UNTREATED seeds only.	PA-CA-ORG	50 g	15 days	95.00
<b><i>Tilletia indica</i><sup>40</sup>, <i>Tilletia caries</i>, <i>Tilletia laevis</i> (<i>Tilletia foetida</i>), <i>Tilletia controversa</i> (bunt)</b>				
Filtration method (COFRAC - Anses MOA 017). Provide the specified quantity of seeds with indication the weight and the number of seeds on the bag (information is under the applicant's responsibility). Analyses only carried out on seed lots from France. UNTREATED seeds only.	PA-CA-ORG2	200 g	15 days	141.00
<b><i>Ustilago nuda</i> (loose smut)</b>				
Embryo extraction method (ISTA 7-013a).	PA-CHI-ORG	4 000	15 days	155.00
<b><i>Ustilago hordei</i> (smut)</b>				
Seed wash method. UNTREATED seeds only.	PA-CH-ORLA	500	15 days	102.00

<sup>40</sup> Quarantine parasite

## Mycology - See p.8 "Seed health"

		Size	Duration	Price
<b>Barley</b>				
<i>Microdochium</i> spp., <i>Fusarium</i> (section <i>Discolor</i> , section <i>Roseum</i> , section <i>Sporotrichiella</i> and other sections), <i>Parastagonospora nodorum</i> ( <i>Septoria nodorum</i> ), <i>Bipolaris sorokiniana</i> ( <i>Helminthosporium sativum</i> ), <i>Helminthosporium</i> sp.				
Agar method with superficial disinfection. <b>UNTREATED seeds only.</b>	PA-ES-ORGD	400	19 days	<b>110.00</b>
Seed wash method. <b>Untreated seeds only.</b>	PA-ES-ORG	400	19 days	<b>106.00</b>
<i>Ramularia collo-cygni</i>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-RAM-ORG	500	15 days	<b>102.00</b>
<i>Helminthosporium</i> spp. ( <i>Pyrenophora</i> spp.)				
Identification of species in addition to detection test.	PA-ID-HEL	/	/	<b>129.00</b>
<b>Rice</b>				
<i>Alternaria padwickii</i> , <i>Bipolaris oryzae</i> ( <i>Helminthosporium oryzae</i> ), <i>Pyricularia oryzae</i> ( <i>Magnaporthe grisea</i> ), <i>Curvularia</i> sp., <i>Nigrospora oryzae</i>				
Agar method.	PA-ES-RIZ	400	19 days	<b>139.00</b>
Blotter method (ISTA 7-10, 7-011, 7-012).	PA-ESI-RIZ	400	19 days	<b>139.00</b>
<b>Rye</b>				
<i>Tilletia caries</i> , <i>Tilletia laevis</i> ( <i>Tilletia foetida</i> ), <i>Tilletia controversa</i> (bunt)				
Filtration and counting method. <b>Provide the specified quantity of seeds with indication the weight and the number of seeds on the bag (information is under the applicant's responsibility). UNTREATED seeds only.</b>	PA-CA-SEI	50 g	15 days	<b>95.00</b>
<i>Tilletia indica</i> <sup>40</sup> , <i>Tilletia caries</i> , <i>Tilletia laevis</i> ( <i>Tilletia foetida</i> ), <i>Tilletia controversa</i> (bunt)				
Filtration method (COFRAC - Anses MOA 017). <b>Provide the specified quantity of seeds with indication the weight and the number of seeds on the bag (information is under the applicant's responsibility). Analyses only carried out on seed lots from France. UNTREATED seeds only.</b>	PA-CA-SEI2	200 g	15 days	<b>141.00</b>
<i>Ustilago hordei</i> (smut)				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-CH-SEI	500	15 days	<b>102.00</b>
<i>Microdochium</i> spp., <i>Fusarium</i> (all sections), <i>Parastagonospora nodorum</i> ( <i>Septoria nodorum</i> ), <i>Bipolaris sorokiniana</i> ( <i>Helminthosporium sativum</i> ), <i>Helminthosporium</i> sp.				
Agar method with superficial disinfection. <b>UNTREATED seeds only.</b>	PA-ES-SEID	400	19 days	<b>110.00</b>
Agar method without superficial disinfection. <b>Treated seeds only.</b>	PA-ES-SEI	400	19 days	<b>106.00</b>
<b>Triticale</b>				
<i>Tilletia caries</i> , <i>Tilletia laevis</i> ( <i>Tilletia foetida</i> ), <i>Tilletia controversa</i> (bunt)				
Filtration and counting method. <b>Provide the specified quantity of seeds with indication the weight and the number of seeds on the bag (information is under the applicant's responsibility). UNTREATED seeds only.</b>	PA-CA-TRI	50 g	15 days	<b>95.00</b>
<i>Tilletia indica</i> <sup>40</sup> , <i>Tilletia caries</i> , <i>Tilletia laevis</i> ( <i>Tilletia foetida</i> ), <i>Tilletia controversa</i> (bunt)				
Filtration method (COFRAC - Anses MOA 017). <b>Provide the specified quantity of seeds with indication the weight and the number of seeds on the bag (information is under the applicant's responsibility). Analyses only carried out on seed lots from France. UNTREATED seeds only.</b>	PA-CA-TRI2	200 g	15 days	<b>141.00</b>
<i>Ustilago tritici</i> (loose smut)				
Embryo extraction method. <b>UNTREATED seeds only.</b>	PA-CH-TRI	2 000	15 days	<b>110.00</b>
<i>Microdochium</i> spp., <i>Fusarium</i> (all sections), <i>Parastagonospora nodorum</i> ( <i>Septoria nodorum</i> ), <i>Bipolaris sorokiniana</i> ( <i>Helminthosporium sativum</i> ), <i>Helminthosporium</i> sp.				
Agar method with superficial disinfection. <b>UNTREATED seeds only.</b>	PA-ES-TRID	400	19 days	<b>110.00</b>
Agar method without superficial disinfection. <b>Treated seeds only.</b>	PA-ES-TRI	400	19 days	<b>106.00</b>

## Nematology

		Size	Duration	Price
<b>Oats</b>				
<i>Ditylenchus dipsaci</i>				
Filtration (COFRAC - Anses MOA013 parts A and B). <b>UNTREATED seeds only. Test carried out on the whole submitted sample. If the supplied quantity is too important, a new sample will be requested.</b>	PA-NE-AV	200 g	16 days	<b>76.00</b>
<b>Rice</b>				
<i>Aphelenchoides besseyi</i>				
Grinding + filtration (ISTA 7-025). <b>UNTREATED seeds only.</b>	PA-NE-RIZ	1 000	16 days	<b>83.00</b>

Virogoly - Uncoated seeds only			
	Size	Duration	Price
<b>Wheat, Barley</b>			
<b>Barley stripe mosaic virus (BSMV)</b>			
ELISA.	PA-VI-45	Contact SNES	

EVALUATION OF VARIETIES			
Varietal resistance			
	Size	Duration	Price
<b>Wheat</b>			
<b>WSSMV (Wheat spindle streak mosaic virus)</b>			
Detection by ELISA.	PA-R-BLE-1	20 plants /	90.00
<b>SBCMV (Soil-borne cereal mosaic virus)</b>			
Detection by ELISA.	PA-R-BLE-2	20 plants /	90.00
<b>Tilletia caries</b>			
Method by grow -out and detection on plantlets by PCR.	PA-R-BLE-3	Contact SNES	
<b>Barley</b>			
<b>BaMMV (Barley mild mosaic virus)</b>			
Detection by ELISA.	PA-R-ORG1	20 plants /	90.00
<b>BaYMV (Barley yellow mosaic virus)</b>			
Detection by ELISA.	PA-R-ORG2	20 plants /	90.00
<b>WDV (Wheat dwarf virus)</b>			
Detection by ELISA.	PA-R-ORG3 NEW	Contact SNES	
<b>Wheat, Barley</b>			
<b>BaMMV (Barley mild mosaic virus)</b>			
Detection by PCR.	BI-D-VIR-MOSA1	Contact BioGEVES	
<b>BaYMV (Barley yellow mosaic virus)</b>			
Detection by PCR.	BI-D-VIR-MOSA2	Contact BioGEVES	
Pathotype identification dCAPS method (Y1/Y2).	BI-D-V-DCAPS	Contact BioGEVES	
<b>BYDV (Barley yellow dwarf virus)</b>			
Detection and identification of BYDV-MAV, BYDV-PAV, BYDV-SGV and BYDV-RPV by PCR.	BI-D-V-JNO	Contact BioGEVES	
<b>WDV (Wheat dwarf virus)</b>			
Detection by PCR.	BI-D-VIR-MOSA5	Contact BioGEVES	
<b>SBWMV (Soil-borne wheat mosaic virus)</b>			
Detection by PCR.	BI-D-VIR-MOSA4	Contact BioGEVES	
<b>SBCMV (Soil-borne cereal mosaic virus)</b>			
Detection by PCR.	BI-D-VIR-MOSA3	Contact BioGEVES	
<b>WSSMV (Wheat spindle streak mosaic virus)</b>			
Detection by PCR.	BI-D-VIR-MOSA6	Contact BioGEVES	

Different prices outside test periods. Contact SNES for tests outside periods (March - April)

Genotyping by protein profiling			
	Size	Duration	Price
<b>Durum Wheat</b>			
Research and characterisation of LMW1 and LMW2 bands for the varieties of Durum wheat, 1 variety x 5.	BI-G-EL-LMW	Contact BioGEVES	
Genotyping by molecular biology			
	Size	Duration	Price
<b>Durum Wheat, Bread Wheat, Barley, Triticale</b>			
Varietal purity analysis - SSR - 90 seeds.	BI-G-BM-SSR-PUR-90	Contact BioGEVES	
Seed mixture detection.	BI-G-BM-SSR-PUR-40	Contact BioGEVES	
<b>Durum Wheat, Barley, Rice, Triticale</b>			
Varietal identity control - SSR.	BI-G-BM-SSR-CID-1	Contact BioGEVES	
<b>Bread Wheat</b>			
Varietal identification (french collection, organic, recommended varieties for milling).	BI-G-BM-SSR-CID-2	Contact BioGEVES	
Varietal identity control for milling.	BI-G-BM-SSR-CID-3	Contact BioGEVES	

## Genotyping by molecular biology

	Size	Duration	Price
<b>Bread Wheat</b> Varietal identity control for organic wheat.	<b>BI-G-BM-SSR-CID-4</b>		Contact BioGEVES
<b>Malting Barley</b> Varietal identity control for brewery.	<b>BI-G-BM-SSR-CID-5</b>		Contact BioGEVES

## Technological quality : biochemicals tests

	Size	Duration	Price
<b>Durum Wheat</b> Protein content (NIRS).	<b>BI-B-NIRS-P</b>		Contact BioGEVES

## Other tests

		Size	Duration	Price
Dormancy index for cereal varieties.	GE-IND-DOR NEW	1 000	21 days	54.00
Barley				
Morphological control of Barley seeds (character of racilla and crease).	SEV-AUT-GROR	1 000	/	44.50

## Field tests by SEV

		Price
DUS testing - <b>Winter oat</b> .	<b>SEV-DHS-AVH</b>	<b>1065.00</b>
DUS testing - <b>Spring oat</b> .	<b>SEV-DHS-AVP</b>	<b>1110.00</b>
DUS testing - <b>Winter wheat</b> .	<b>SEV-DHS-BTH</b>	<b>1430.00</b>
DUS testing - <b>Spring wheat</b> .	<b>SEV-DHS-BTP</b>	<b>1490.00</b>
DUS testing - <b>Winter barley</b> .	<b>SEV-DHS-ORH</b>	<b>1430.00</b>
DUS testing - <b>Spring barley</b> .	<b>SEV-DHS-ORP</b>	<b>1490.00</b>
DUS testing - <b>Durum wheat</b> .	<b>SEV-DHS-BD</b>	<b>1430.00</b>
DUS testing - <b>Triticale</b> .	<b>SEV-DHS-TRI</b>	<b>1430.00</b>

## PUBLICATIONS (Contact SNES)

## Germination analysis technical sheet

Evaluation of <b>Cereals</b> seedlings.	<b>GE-T-CER</b>
---	-----------------

## Identification data sheet of seeds and other impurities

Cereals ( <i>Avena sativa</i> , <i>Triticum aestivum</i> , <i>Triticum durum</i> , <i>Hordeum vulgare</i> , <i>xSecale cereale</i> ).	<b>AP-C-5</b>
<i>Sorghum bicolor</i> .	<b>AP-C-17</b>
<i>Avena fatua</i> - <i>Avena sativa</i> .	<b>AP-A-02</b>

## Collection of seeds

Weed's identification for <b>Cereals</b> analysis.	<b>APCS-CER</b>
--	-----------------

## SEED QUALITY

### Physical quality

		Size	Duration	Price
<b>Thousand-seed weight (on purity test performed by SNES)</b>				
Thousand-seed weight on pure seeds.	MMS-01	/	/	33.00
<b>Preparation of pure seeds for germination test</b>				
All forage grasses species.	PU-PR-GRA	ISTA weight	/	31.90
Other forage species.	PU-PR-20	/	/	0.00
<b>Purity analysis test</b>				
Purity - <b>Field bean, Faba bean, Lupin, Pea.</b>	PU-IS-02	ISTA weight	/	25.80
Purity on leguminous - <b>Bermuda grass, Fenugreek, Birds-foot trefoil, Alfalfa, Black Medick, Phacelia, Plantain, Sainfoin, Clover, Vetch.</b>	PU-IS-FOU1	ISTA weight	/	47.90
Purity on grasses - <b>Festulolium, Tall fescue, Sweet vernal grass, Tall oat grass, Bahia grass, Harding grass, Rye grass, Meadow foxtail.</b>	PU-IS-FOU2	ISTA weight	/	74.00
Purity on grasses - <b>Bent-grass, Yellow oatgrass, Brome, Tufted hair grass, Cocksfoot, Sheep fescue, Red fescue, Meadow fescue, Meadow grass.</b>	PU-IS-FOU3	ISTA weight	/	85.00
Percentage of a specific type of other seeds. <b>Specify the search to be performed.</b>	PU-CONS1	/	/	9.00
Percentage of a specific type of inert materials. <b>Specify the search to be performed.</b>	PU-CONS2	/	/	9.00
Supplement for purity analysis if received as raw seeds.	PU-LB-SUP		Contact SNES	
<b>Counting of all other seeds</b>				
Full counting - <b>Field bean, Faba bean, Lupin, Pea.</b>	SP-IS-02	ISTA weight	/	25.80
Full counting on leguminous - <b>Alfalfa, Black Medick, Phacelia, Narrow-leaf plantain, Clover.</b>	SP-IS-LEG1	ISTA weight	/	148.00
Full counting on leguminous - <b>Fenugreek, Birds-foot trefoil, Sainfoin, Vetch.</b>	SP-IS-LEG2	ISTA weight	/	225.00
Full counting on grasses - <b>Festulolium, Tall fescue, Sweet vernal grass, Tall oat grass, Bahia grass, Harding grass, Rye grass, Meadow foxtail.</b>	SP-IS-GRA1	ISTA weight	/	315.00
Full counting on grasses - <b>Bent-grass, Yellow oatgrass, Brome, Tufted hair grass, Cocksfoot, Sheep fescue, Red fescue, Meadow fescue, Meadow grass.</b>	SP-IS-GRA2	ISTA weight	/	202.00
Counting of other seeds on purity weight. Indication of the number of other seeds in the specific purity test.	PU-SP-01	/	/	13.40
<b>Limited counting of all other seeds</b>				
Searching of 1 to 4 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-01	ISTA weight	/	64.00
Searching of 5 to 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-02	ISTA weight	/	102.00
Searching of more than 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-20		Contact SNES	
Searching of <i>Cuscuta</i> spp. - <b>Trefoil, White clover, Hybrid clover, Micheli's clover, Strawberry clover, Arrowleaf clover.</b>	SP-CU100-T	< 100 g	/	90.00
	SP-CU250-T	150 to 300g	/	259.00
	SP-CU500-T	400 to 600g	/	469.00
Searching of <i>Cuscuta</i> spp. - <b>Alfalfa, Black medick, Red clover, Carnation clover, Egyptian clover, Persian clover.</b>	SP-CU100-P	< 100 g	/	37.30
	SP-CU250-P	150 to 300g	/	91.00
	SP-CU500-P	400 to 600g	/	176.00
Searching of <i>Avena fatua</i> - <b>Pea, Vetch.</b>	SP-AF-3KG2	3 kg	/	67.00
Searching by Veskof type - <b>Alfalfa, Clover.</b>	SP-VE-02	/	/	177.00
Searching by Veskof type - <b>Brome, Cocksfoot/ Orchard grass , Tall oat grass.</b>	SP-VE-10	/	/	93.00
<b>Counting of all other seeds</b>				
Searching by Veskof type - <b>Festulolium, Harding grass, Meadow foxtail, Rye grass, Tall fescue.</b>	SP-VE-11	/	/	67.00
<b>Full counting of all other seeds</b>				
Searching by Veskof type - <b>Other species.</b>	SP-VE-AUTR		Contact SNES	
Searching by dehydration standard - <b>Alfalfa.</b>	SP-DESHY	/	/	84.00
Searching of <i>Orobanch</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO	ISTA weight	/	75.00
Searching of <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-STRIGA	ISTA weight	/	75.00
Searching of <i>Orobanch</i> sp. and <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO-STR	ISTA weight	/	110.00
<b>Tests on coated seeds</b>				
Purity on coated seeds.	PU-IS-21	2 500	/	34.30



## Physical quality

		Size	Duration	Price
<b>Tests on coated seeds</b>				
Pelleting material removal and full counting on 2 500 coated seeds. <b>Only on UNTREATED seeds.</b>	SP-ENR2500	2 500	/	102.00
Pelleting material removal and full counting on 7 500 coated seeds. <b>Only on UNTREATED seeds.</b>	SP-ENR-TOT	7 500	/	309.00
Pelleting material removal and limited counting of other seeds from 1 to 3 botanical species, on 7 500 coated seeds. <b>Only on UNTREATED seeds.</b>	SP-ENR-LIM	7 500	/	242.00
<b>Moisture content - Provide seeds in watertight bags from which as much air as possible has been extracted</b>				
Oven method.	TE-SN-01	ISTA weight	/	20.70
<b>Identification of individual seeds</b>				
Visual identification by species.	ID-IS-01	/	/	34.60

## Physiological quality

		Size	Duration	Price
<b>Germination test on 400 seeds</b>				
Festulolium, Fenugreek, Tall fescue, Timoty, Harding grass, Birdsfoot trefoil, Alfalfa, Black medick, Rye grass, Sainfoin, Clover, Meadow foxtail.	GE-FG-06-4	1 250	/	66.00
Bent-grass, Yellow oatgrass, Brome, Bermuda grass, Cocksfoot, Meadow fescue, Sheep fescue, Red fescue, Tall oat grass, Meadow grass, Vetch.	GE-FG-09-4	1 250	/	77.00
Fodder kale, Forage pea, Forage radish.	GE-FG-18-4	1 250	/	65.00
<b>Germination test on 200 seeds</b>				
Festulolium, Fenugreek, Tall fescue, Timoty, Harding grass, Birdsfoot trefoil, Alfalfa, Black medick, Rye grass, Sainfoin, Clover, Meadow foxtail.	GE-FG-06-2	500	/	45.80
Bent-grass, Yellow oatgrass, Brome, Bermuda grass, Cocksfoot, Meadow fescue, Sheep fescue, Red fescue, Tall oat grass, Meadow grass, Vetch.	GE-FG-09-2	500	/	51.00
Fodder kale, Forage pea, Forage radish.	GE-FG-18-2	500	/	52.00
<b>Fluorescence</b>				
Fluorescence of <b>Rye grass</b> roots on 400 seedlings (germination and identification). Enables distinguishing <i>Lolium perenne</i> showing no fluorescence unlike <i>Lolium multiflorum</i> and <i>Lolium boucheanum</i> these exhibit fluorescent roots.	FLUO-1	/	/	114.00

## Bacteriology - Uncoated seeds only

		Size	Duration	Price
<b>Brassicaceae (Broccoli, Cabbage, Cauliflower, Turnip, Radish) - Detection of 1 pathogen</b>				
<b><i>Xanthomonas campestris</i> pv. <i>campestris</i> (Xcc)</b>				
Agar method + pathogenicity test in case of suspect colonies (ISTA 7-019a without counting of colonies).	PA-BA-04	30 000	36 days	220.00
<b>Disinfected seeds</b> . Grinding + agar method + pathogenicity test in case of suspect colonies (ISTA 7-019b without counting of colonies).	PA-BA-105	30 000	36 days	262.00
Agar method + counting of colonies + pathogenicity test in case of suspect colonies (ISTA 7-019a).	PA-BA-03	30 000	36 days	232.00
<b>Disinfected seeds</b> . Grinding + agar method + counting of colonies + pathogenicity test in case of suspect colonies (ISTA 7-019b).	PA-BA-05	30 000	36 days	276.00
<b><i>Xanthomonas campestris</i> pv. <i>raphani</i> (armoraciae) (Xcr)</b>				
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-29	30 000	36 days	211.00
<b>Disinfected seeds</b> . Grinding + agar method + pathogenicity test in case of suspect colonies.	PA-BA-30	30 000	36 days	262.00
<b>Brassicaceae (Cabbage, Cauliflower, Broccoli, Radish, Turnip) - Detection of 1 pathogen</b>				
<b><i>Pseudomonas syringae</i> pv. <i>maculicola</i> (Psm)</b>				
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-10	30 000	36 days	225.00
<b>Brassicaceae (Broccoli, Cabbage, Cauliflower, Turnip, Radish) - Detection of 1 pathogen</b>				
<b><i>Pseudomonas syringae</i> pv. <i>maculicola</i> (Psm)</b>				
<b>Disinfected seeds</b> . Grinding + agar method + pathogenicity test in case of suspect colonies.	PA-BA-33	30 000	36 days	266.00
<b>Brassicaceae (Broccoli, Cabbage, Cauliflower, Turnip, Radish) - Detection of 2 pathogens</b>				
<b>Xcc + Xcr</b>				
Agar method + pathogenicity test in case of suspect colonies (ISTA 7-019a without counting of colonies for Xcc and Xcr).	PA-BA-06	30 000	36 days	266.00

## Bacteriology - Uncoated seeds only

		Size	Duration	Price
<b>Brassicaceae (Broccoli, Cabbage, Cauliflower, Turnip, Radish) - Detection of 2 pathogens</b>				
<b>Xcc + Xcr</b>				
<b>Disinfected seeds.</b> Grinding + agar method + pathogenicity test in case of suspect colonies (ISTA 7-019b without counting of colonies for Xcc).	PA-BA-07	30 000	36 days	<b>316.00</b>
<b>Xcc + Psm</b>				
Agar method + pathogenicity test in case of suspect colonies colonies (ISTA 7-019a without counting of colonies for Xcc).	PA-BA-45	30 000	36 days	<b>324.00</b>
<b>Xcr + Psm</b>				
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-46	30 000	36 days	<b>324.00</b>
<b>Brassicaceae (Broccoli, Cabbage, Cauliflower, Turnip, Radish) - Detection of 3 pathogens</b>				
<b>Xcc + Xcr + Psm</b>				
Agar method + pathogenicity test in case of suspect colonies colonies (ISTA 7-019a without counting of colonies for Xcc and Xcr).	PA-BA-08	30 000	36 days	<b>378.00</b>
<b>Pea - Detection of 1 pathogen</b>				
<b><i>Pseudomonas syringae</i> pv. <i>pisi</i> (Psp)</b>				
Agar method + pathogenicity test in case of suspect colonies (method derived from Anses BHs/99/03).	PA-BA-21	5 000	26 days	<b>196.00</b>
	PA-BA-70	15 000	26 days	<b>292.00</b>
Agar method + pathogenicity test in case of suspect colonies (ISTA 7-029).	PA-BA-21-1	5 000	32 days	<b>240.00</b>
<b><i>Pseudomonas syringae</i> pv. <i>syringae</i> (Pss)</b>				
Agar method + pathogenicity test in case of suspect colonies (Anses BHs/99/03).	PA-BA-22	5 000	32 days	<b>215.00</b>
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-84	15 000	32 days	<b>292.00</b>
<b>Pea - Detection of 2 pathogens</b>				
<b>Psp + Pss</b>				
Agar method + pathogenicity test in case of suspect colonies (Anses BHs/99/03).	PA-BA-22-2	5 000	36 days	<b>249.00</b>
	PA-BA-85	15 000	36 days	<b>378.00</b>
<b>Vetch</b>				
<b><i>Pseudomonas syringae</i> pv. <i>pisi</i></b>				
Agar method + PCR in case of suspect colonies (method derived from Anses BHs/99/03).	PA-BA-99	5 000	33 days	<b>216.00</b>
<b>Pea - Supplement fee pathogenicity test</b>				
<b><i>Pseudomonas syringae</i> pv. <i>pisi</i></b>				
Confirmation by pathogenicity test PCR positive isolates.	PA-PP-PSP	/	9 days	<b>78.00</b>

## Mycology - See p.8 "Seed health"

		Size	Duration	Price
<b>Brassicaceae (Cabbage, Rape, Turnip, Radish, Rocket)</b>				
<b><i>Leptosphaeria maculans</i> and/or <i>Plenodomus biglobosus</i> (<i>Phoma lingam</i>), <i>Alternaria brassicae</i>, <i>Alternaria brassicicola</i>, <i>Alternaria japonica</i>, <i>Sclerotinia sclerotiorum</i>, <i>Botrytis cinerea</i>, <i>Phoma</i> sp.</b>				
Agar method (derivated from ISTA method 7-004).	PA-ES-CHO	400	19 days	<b>106.00</b>
<b><i>Leptosphaeria maculans</i> and/or <i>Plenodomus biglobosus</i> (<i>Phoma lingam</i>)</b>				
Agar method (ISTA 7-004).	PA-PH-CHO	1 000	25 days	<b>262.00</b>
<b><i>Albugo candida</i></b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-ALB-CHO	500	15 days	<b>102.00</b>
<b><i>Hyaloperonospora parasitica</i> (downy mildew)</b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-MI-CHO	500	15 days	<b>102.00</b>
Grow-out method (viability testing).	PA-MICHOGO	400	42 days	<b>129.00</b>
<b>Brome</b>				
<b><i>Ustilago bullata</i> (<i>Ustilago bromivora</i>) and <i>Ustilago striiformis</i></b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-CH-BRO	500	15 days	<b>102.00</b>
<b>Cocksfoot/ Orchard Grass</b>				
<b><i>Epichloe mollis</i> (<i>Neotyphodium typhinum</i>)</b>				
Grow-out and serological method.	PA-NT2-DAC	100	40 days	<b>695.00</b>
<b><i>Pyrenophora lolii</i> (<i>Helminthosporium siccans</i>), <i>Pyrenophora dictyoides</i> (<i>Helminthosporium dictyoides</i>), <i>Colletotrichum graminicola</i> (<i>Glomerella graminicola</i>), <i>Fusarium</i> (all sections), <i>Botrytis</i> sp., <i>Helminthosporium</i> sp.</b>				
Agar method.	PA-ES-DAC	400	19 days	<b>106.00</b>

## Mycology - See p.8 "Seed health"

		Size	Duration	Price
<b>Fescue</b>				
<b><i>Epichloe coenophiala</i> (<i>Neotyphodium coenophialum</i>)</b>				
Serological method (ISTA 7-015). <b>UNTREATED seeds only.</b>	PA-NT2-FET	100	16 days	578.00
Grow-out and serological method.	PA-NT3-FET	100	40 days	695.00
<b><i>Pyrenophora lolii</i> (<i>Helminthosporium siccans</i>), <i>Pyrenophora dictyoides</i> (<i>Helminthosporium dictyoides</i>), <i>Microdochium</i> spp., <i>Fusarium</i> (all sections), <i>Botrytis</i> sp., <i>Helminthosporium</i> sp.</b>				
Agar method.	PA-ES-FET	400	19 days	106.00
<b>Alfalfa</b>				
<b><i>Ascochyta medicaginicola</i> (<i>Ascochyta imperfecta</i>), <i>Fusarium oxysporum</i>, <i>Fusarium avenaceum</i>, <i>Verticillium</i> spp., <i>Stemphylium</i> sp., <i>Sclerotinia</i> sp., <i>Colletotrichum</i> sp., <i>Botrytis cinerea</i>, <i>Fusarium</i> (all sections)</b>				
Agar method.	PA-ES-LUZ	400	19 days	106.00
<b>Millet</b>				
<b><i>Ustilago</i> sp., <i>Sporisorium destruens</i> (<i>Sphacelotheca destruens</i>) or <i>Moesziomyces bullatus</i> (<i>Tolyposporium penicillariae</i>)</b>				
Seed wash method. Please indicate the Latin name of millet. <b>UNTREATED seeds only.</b>	PA-CH-MIL	500	15 days	102.00
<b>Pea</b>				
<b><i>Didymella pisi</i> (<i>Ascochyta pisi</i>), <i>Didymella pinodes</i> (<i>Mycosphaerella pinodes</i>), <i>Didymella pinodella</i> (<i>Phoma pinodella</i>), <i>Stemphylium botryosum</i>, <i>Fusarium</i> (other sections), <i>Botrytis</i> sp., <i>Sclerotinia</i> sp., <i>Phoma</i> sp.</b>				
Agar method with superficial disinfection. <b>UNTREATED seeds only.</b>	PA-ES-POID	400	19 days	110.00
Agar method without superficial disinfection. <b>Treated seeds only.</b>	PA-ES-POI	400	19 days	106.00
<b><i>Peronospora viciae</i> (<i>Peronospora pisi</i>) (downy mildew)</b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-MI-POI	500	15 days	102.00
<b><i>Didymella pisi</i> (<i>Ascochyta pisi</i>)</b>				
Agar method (ISTA 7-005).	PA-ANT-POI	400	19 days	110.00
<b>Radish</b>				
<b><i>Hyaloperonospora parasitica</i> (<i>Peronospora parasitica</i>) (downy mildew)</b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-MI-RAD	500	15 days	102.00
Grow-out method (viability testing).	PA-MIRADGO	400	42 days	129.00
<b>Rye-grass</b>				
<b><i>Epichloe festuca</i> (<i>Neotyphodium lolii</i>)</b>				
Serological method (ISTA 7-015). <b>UNTREATED seeds only.</b>	PA-NT2-RAY	100	16 days	578.00
Grow-out and serological method (viability testing).	PA-NT3-RAY	100	40 days	695.00
<b><i>Pyrenophora lolii</i> (<i>Helminthosporium siccans</i>), <i>Pyrenophora dictyoides</i> (<i>Helminthosporium dictyoides</i>), <i>Microdochium</i> spp., <i>Fusarium</i> (all sections), <i>Botrytis</i> sp., <i>Helminthosporium</i> sp.</b>				
Agar method.	PA-ES-RAY	400	19 days	106.00
<b>Clover</b>				
<b><i>Ascochyta medicaginicola</i> (<i>Ascochyta imperfecta</i>), <i>Fusarium oxysporum</i>, <i>Fusarium avenaceum</i>, <i>Verticillium</i> spp., <i>Stemphylium</i> sp., <i>Sclerotinia</i> sp., <i>Colletotrichum</i> sp., <i>Botrytis cinerea</i>, <i>Fusarium</i> (all sections)</b>				
Agar method.	PA-ES-TRE	400	19 days	106.00

## Nematology

		Size	Duration	Price
<b>Alfalfa</b>				
<b><i>Ditylenchus dipsaci</i></b>				
Detection by Seed Extract PCR and/or morphobiometry (COFRAC - GEVES M-GEVES/SV/MO/001). <b>UNTREATED seed only. If the supplied quantity is too important, a new sample will be requested.</b>	PA-NE-LUZG	200 g	10 days	64.00
<b>Pea</b>				
<b><i>Ditylenchus dipsaci</i></b>				
Filtration (COFRAC - Anses MOA013 parts A and B). <b>UNTREATED seeds only.</b> Test carried out on the whole submitted sample. <b>If the supplied quantity is too important, a new sample will be requested.</b>	PA-NE-POIS	200 g	16 days	76.00

Nematology				
		Size	Duration	Price
<b>Rye-grass</b>				
<b><i>Ditylenchus dipsaci</i></b>				
Filtration (COFRAC - Anses MOA013 parts A and B). <b>UNTREATED seeds only.</b> Test carried out on the whole submitted sample. <b>If the supplied quantity is too important, a new sample will be requested.</b>	PA-NE-RAY	70 g	16 days	76.00
<b>Clover</b>				
<b><i>Ditylenchus dipsaci</i></b>				
Filtration (COFRAC - Anses MOA013 parts A and B). <b>UNTREATED seeds only.</b> Test carried out on the whole submitted sample. <b>If the supplied quantity is too important, a new sample will be requested.</b>	PA-NE-TRE	70 g	16 days	76.00
<b>Plants (leaves and stems)</b>				
<b><i>Ditylenchus dipsaci</i></b>				
Filtration (Anses MOA013 parts A and B).	PA-NE-PLAN	/	16 days	85.00

Virology - Uncoated seeds only				
		Size	Duration	Price
<b>Alfalfa</b>				
<b><i>Alfalfa mosaic (AMV)</i></b>				
ELISA.	PA-VI-71	2 000	16 days	162.00
<b>Pea</b>				
<b><i>Tomato black ring virus (TBRV)</i></b>				
ELISA.	PA-VI-37	2 000	16 days	205.00
<b><i>Pea early browning virus (PEBV)</i></b>				
ELISA (ISTA 7-024).	PA-VI-31	2 000	16 days	205.00
<b><i>Pea enation mosaic virus (PEMV)</i></b>				
ELISA.	PA-VI-57	2 000	16 days	249.00
<b><i>Bean yellow mosaic virus (BYMV)</i></b>				
ELISA.	PA-VI-60	/	/	271.00
<b><i>Bean leaf roll virus (BLRV)</i></b>				
ELISA.	PA-VI-67	/	/	247.00
<b><i>Southern bean mosaic virus (SBMV)</i></b>				
ELISA.	PA-VI-88	/	/	247.00
<b><i>Broad bean true mosaic virus (BBTMV)</i></b>				
ELISA.	PA-VI-50	/	/	247.00
<b>Pea, Vetch</b>				
<b><i>Pea seed borne mosaic virus (PSbMV)</i></b>				
ELISA (ISTA 7-024).	PA-VI-11	2 000	16 days	173.00

EVALUATION OF VARIETIES				
Varietal resistance				
		Size	Duration	Price
<b>Cabbage</b>				
<b><i>Fusarium oxysporum f. sp. conglutinans race 1</i></b>				
Official protocol.	PA-R-CHO	45	/	330.00
<b><i>Plasmodiophora brassicae</i></b>				
GEVES protocol.	PA-R-CHO-1	45	/	242.00
<b>Brassicaceae (Mustard, Forage radish)</b>				
<b><i>Heterodera schachtii</i></b>				
Official protocol.	PA-R-CRU	60	/	802.00
<b><i>Meloidogyne incognita</i></b>				
Official protocol.	PA-R-CRU1	45	/	183.00
<b><i>Meloidogyne hapla</i></b>				
Official protocol.	PA-R-CRU2	45	/	204.00

Different prices outside test periods. Contact SNES for information on the periods according to the species.

## Varietal resistance

		Size	Duration	Price
<b>Brassicaceae (Mustard, Forage radish)</b>				
<b>Meloidogyne javanica</b>				
Official protocol.	PA-R-CRU3	45	/	183.00
<b>Meloidogyne chitwoodi<sup>40</sup></b>				
Official protocol.	PA-R-CRU4	45	/	169.00
<b>Meloidogyne fallax<sup>40</sup></b>				
Official protocol	PA-R-CRU5		Contact SNES	
<b>Festulolium, Fescue, Rye-grass, Italian Rye-grass</b>				
<b>Xanthomonas translucens pv. graminis</b>				
Official protocol.	PA-R-RAY	162	/	312.00
<b>Alfalfa</b>				
<b>Ditylenchus dipsaci</b>				
Official protocol.	PA-R-LUZ-1	2 000	/	680.00
<b>Verticillium albo-atrum</b>				
Official protocol.	PA-R-LUZ-2	500	/	536.00
<b>Colletotrichum trifolii</b>				
Official protocol.	PA-R-LUZ-3	500	/	246.00
Identification of the race.	PA-R-IDCOL		Contact SNES	
<b>Sclerotinia trifoliorum</b>				
GEVES protocol.	PA-R-LUZ-4	500	/	402.00
<b>Fusarium oxysporum f. sp. medicaginis</b>				
GEVES protocol.	PA-R-LUZ-5	500	/	402.00
<b>Pea</b>				
<b>Ascochyta pisi race C</b>				
Official protocol.	PA-R-POI-1	30	/	102.00
<b>Fusarium oxysporum f. sp. pisi race 1</b>				
Official protocol.	PA-R-POI-2	30	/	114.00
<b>BYMV (Bean yellow mosaic virus)</b>				
Official protocol.	PA-R-POI-3	30	/	106.00
<b>PEMV (Pea enation mosaic virus)</b>				
Official protocol.	PA-R-POI-4	30	/	121.00
<b>Erysiphe pisi</b>				
Official protocol.	PA-R-POI-5	30	/	170.00

Different prices outside test periods. Contact SNES for information on the periods according to the species.

## Technological quality : biochemicals tests

		Size	Duration	Price
<b>Alfalfa, Pea</b>				
Tannin content (assay by spectrophotometry).	BI-B-SPEC-TAN		Contact BioGEVES	
<b>Pea</b>				
Antitrypsin factors (assay by spectrophotometry).	BI-B-SPEC-FAT		Contact BioGEVES	

## Genotyping by molecular biology

		Size	Duration	Price
<b>Fodder Kale, Pea</b>				
Varietal identity control - SSR.	BI-G-BM-SSR-CID-1		Contact BioGEVES	
Varietal purity analysis - SSR - 90 seeds.	BI-G-BM-SSR-PUR-90		Contact BioGEVES	

## Field tests by SEV

		Size	Duration	Price
DUS testing - Cocksfoot, Tall fescue.	SEV-DHS-DACFET			1400.00
DUS testing - Brome.	SEV-DHS-BRO			1110.00
DUS testing - Festulolium.	SEV-DHS-FES			1110.00
DUS testing - Tall fescue.	SEV-DHS-FETG			1400.00
DUS testing - Field Pea.	SEV-DHS-POIF			1110.00



Field tests by SEV		
		Price
DUS testing - Sainfoin.	SEV-DHS-SAI	1110.00
DUS testing - Alfalfa.	SEV-DHS-LUZ	1500.00
DUS testing - Salzmänn's restharrow, Fenugreek, Dwarf chickling vetch, Chickling vetch, Hybrid vetch, Narrow-leaved plantain, Field Pea, Berseem clover, Crimson clover, Balansa clover, Persian clover, Clover squarrosom, Arrow-leaf clover, Common Vetch, Hairy vetch, Hungarian vetch, Reddish turfted vetch.	SEV-DHS-AUTFOU	1110.00
New assessment of the value in use of a variety of turf in the catalogue : over 3 years, price per year.	SEV-RETEST-GAZ	2380.00

PUBLICATIONS (Contact SNES)

<b>Method sheet</b>	
Vigour testing - Conductivity - Pea.	VIG-2-M
<b>Germination analysis technical sheet</b>	
Evaluation of Cabbage seedlings.	GE-T-CHOU
Evaluation of Alfafa seedlings.	GE-T-LUZ
Evaluation of Pea seedlings.	GE-T-POI
Evaluation of Radish seedlings.	GE-T-RAD
<b>Technical sheet for analysis of specific purity and counting of all other seeds</b>	
Gramineae ( <i>Lolium</i> spp. , <i>Festuca arundinacea</i> , <i>Festuca</i> cf. <i>ovina rubra</i> , <i>Festuca pratensis</i> , <i>Dactylis glomerata</i> ).	AP-C-1
<i>Trifolium</i> spp.	AP-C-1B
<i>Brassica napus</i> .	AP-C-4
<i>Medicago sativa</i> , <i>Trifolium pratense</i> .	AP-C-7
<i>Pisum sativum</i> , <i>Vicia faba</i> .	AP-C-8
<i>Vicia sativa</i> .	AP-C-11
Seed blower calibration for uniform blowing ( <i>Dactylis glomerata</i> , <i>Poa pratensis</i> , <i>Poa trivialis</i> ).	AP-M-2
<b>Identification data sheet of seeds and other impurities</b>	
Polygonaceae ( <i>Persicaria maculosa</i> , <i>Persicaria lapathifolia</i> , <i>Fallopia convolvulus</i> , <i>Polygonum aviculare</i> , <i>Rumex</i> sp., <i>Rumex acetosella</i> , <i>Rumex maritimus</i> ).	AP-A-03
<i>Chenopodium</i> sp., <i>Atriplex</i> sp., <i>Amaranthus</i> sp., <i>Reseda</i> sp., <i>Myosotis</i> sp.	AP-A-04
<i>Lathyrus</i> spp. ( <i>Lathyrus sylvestris</i> , <i>Lathyrus latifolius</i> , <i>Lathyrus hirsutus</i> , <i>Lathyrus tuberosus</i> , <i>Lathyrus odoratus</i> , <i>Lathyrus aphaca</i> , <i>Lathyrus pratensis</i> , <i>Lathyrus sativus</i> , <i>Lathyrus cicera</i> ).	AP-A-05
Asteraceae ( <i>Anthemis arvensis</i> , <i>Glebionis segetum</i> , <i>Chicorium</i> sp., <i>Tripleurospermum inodorum</i> , <i>Helminthotheca echioïdes</i> , <i>Lapsana communis</i> , <i>Lactuca sativa</i> , <i>Sonchus</i> spp., <i>Cirsium arvense</i> , <i>Cirsium vulgare</i> , <i>Centaurea cyanus</i> ).	AP-A-06
<i>Cuscuta</i> spp.	AP-P-1
<i>Claviceps purpurea</i> - <i>Sclerotinia sclerotiorum</i> .	AP-P-2
<b>Collection of seeds</b>	
Weed's identification for <i>Brassica napus</i> analysis.	APCS-BRA-N
Weed's identification for <i>Medicago sativa</i> and <i>Trifolium pratense</i> analysis.	APCS-MED-S
Weed's identification for <i>Pisum sativum</i> and <i>Vicia faba</i> analysis.	APCS-PIS-S

# Seed mixture species

## SEED QUALITY

### Physical quality

Size Duration Price

#### Purity analysis test and determination of the composition of a seed mixture of species

##### Only on naked seeds

Less than 4 components WITH declared composition <sup>2</sup> .	PU-MEL-01	/	60 days	513.00
From 4 components WITH declared composition <sup>2</sup> .	PU-MEL-02		Contact SNES	
WITHOUT declared composition.	PU-MEL-03	/	60 days	843.00

##### Preparation of pure seed for germination testing

Seed mixture (less than 4 components) WITH declared composition <sup>2</sup> .	PU-PR-19	/	/	212.00
From 4 components WITH declared composition <sup>2</sup> .	PU-PR-22		Contact SNES	
WITHOUT declared composition.	PU-PR-19-1	/	/	508.00
Preparation of pure seeds in dragees on coated seed mixture.	PU-PR-19-2	/	/	35.90

<sup>2</sup> Provide the % of species in the seed mixture.

### Physiological quality <sup>3</sup>

#### Germination test on 400 seeds

Species mixture by component. All the species of the seed mixture will be analyzed whatever is the proportion, except opposite request.	GE-FG-19-4
---	------------

#### Germination test on 200 seeds

Species mixture by component. All the species of the seed mixture will be analyzed whatever is the proportion, except opposite request.	GE-FG-19-2
---	------------

<sup>3</sup> See details of price and size in the chapter of the species.

SEED QUALITY

Physical quality

		Size	Duration	Price
<b>Thousand-seed weight (on purity test performed by SNES)</b>				
Thousand-seed weight on pure seeds.	MMS-01	/	/	33.00
<b>Purity analysis test</b>				
Purity - Hemp.	PU-IS-14	ISTA weight	/	45.60
Purity - Flax.	PU-IS-15	ISTA weight	/	33.70
Percentage of a specific type of other seeds. <b>Specify the search to be performed.</b>	PU-CONS1	/	/	9.00
Percentage of a specific type of inert materials. <b>Specify the search to be performed.</b>	PU-CONS2	/	/	9.00
Supplement for purity analysis if received as raw seeds.	PU-LB-SUP		Contact SNES	
<b>Counting of all other seeds</b>				
Full counting - Hemp.	SP-IS-13	ISTA weight	/	79.00
Full counting - Flax.	SP-IS-14	ISTA weight	/	45.60
Counting of other seeds on purity weight. Indication of the number of other seeds in the specific purity test.	PU-SP-01	/	/	13.40
<b>Limited counting of all other seeds</b>				
Searching of 1 to 4 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-01	ISTA weight	/	64.00
Searching of 5 to 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-02	ISTA weight	/	102.00
Searching of more than 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-20		Contact SNES	
Searching of <i>Orobanche</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO	ISTA weight	/	75.00
Searching of <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-STRIGA	ISTA weight	/	75.00
Searching of <i>Orobanche</i> sp. and <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO-STR	ISTA weight	/	110.00
<b>Moisture content - Provide seeds in watertight bags from which as much air as possible has been extracted</b>				
Oven method.	TE-SN-01	ISTA weight	/	20.70
<b>Identification of individual seeds</b>				
Visual identification by species.	ID-IS-01	/	/	34.60

Physiological quality

		Size	Duration	Price
<b>Germination test on 400 seeds</b>				
Hemp, Flax.	GE-FG-14-4	1 250	/	57.00
<b>Germination test on 200 seeds</b>				
Hemp, Flax.	GE-FG-14-2	500	/	42.80

Mycology - See p.8 "Seed health"

		Size	Duration	Price
<b>Hemp</b>				
<b><i>Botrytis cinerea</i>, <i>Sclerotinia sclerotiorum</i></b>				
Blotter method.	PA-ES-CHA	400	23 days	139.00
<b>Flax</b>				
<b><i>Botrytis cinerea</i>, <i>Boeremia exigua</i> (<i>Phoma exigua</i>), <i>Colletotrichum linicola</i> (<i>Colletotrichum lini</i>), <i>Alternaria linicola</i>, <i>Fusarium</i> (all sections)</b>				
Agar method.	PA-ES-LIN	400	23 days	106.00
<b><i>Alternaria linicola</i>, <i>Botrytis cinerea</i>, <i>Colletotrichum linicola</i> (<i>Colletotrichum lini</i>)</b>				
Agar method (ISTA 7-007).	PA-BOT-LIN	400	23 days	106.00

## EVALUATION OF VARIETIES

### Varietal resistance

#### Hemp

##### *Phelipanche ramosa*

Official protocol.

GE-TR-CHOR

Size Duration Price

/ / 335.00

### Genotyping by molecular biology

#### Flax

Varietal identity control - SSR.

BI-G-BM-SSR-CID-1

Contact BioGEVES

Varietal purity analysis - SSR - 90 seeds.

BI-G-BM-SSR-PUR-90

Contact BioGEVES

### Technological quality: biochemicals tests

#### Flax

Fatty acid composition (method GC).

BI-B-CPG-AG

Contact BioGEVES

Oil content (NMR).

BI-B-RMN-H

Contact BioGEVES

### Field tests by SEV

DUS testing - **Flax**, Linseed.

SEV-DHS-LIN

Price

1235.00

DUS testing - **Hemp**.

SEV-DHS-CHA

1350.00

## PUBLICATIONS (Contact SNES)

#### Germination analysis technical sheet

Evaluation of **Hemp** and **Flax** seedlings.

GE-T-LIN

SEED QUALITY

Physical quality

		Size	Duration	Price
<b>Thousand-seed weight (on purity test performed by SNES)</b>				
Thousand-seed weight on pure seeds.	MMS-01	/	/	33.00
<b>Purity analysis test</b>				
Purity - <b>Corn, Sorghum.</b>	PU-IS-02	ISTA weight	/	25.80
Percentage of a specific type of other seeds. <b>Specify the search to be performed.</b>	PU-CONS1	/	/	9.00
Percentage of a specific type of inert materials. <b>Specify the search to be performed.</b>	PU-CONS2	/	/	9.00
Supplement for purity analysis if received as raw seeds.	PU-LB-SUP		Contact SNES	
<b>Counting of all other seeds</b>				
Full counting - <b>Corn, Sorghum.</b>	SP-IS-02	ISTA weight	/	25.80
Counting of other seeds on purity weight. Indication of the number of other seeds in the specific purity test.	PU-SP-01	/	/	13.40
<b>Limited counting of all other seeds</b>				
Searching of 1 to 4 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-01	ISTA weight	/	64.00
Searching of 5 to 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-02	ISTA weight	/	102.00
Searching of more than 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-20		Contact SNES	
<b>Moisture content - Provide seeds in watertight bags from which as much air as possible has been extracted</b>				
Oven method.	TE-SN-01	ISTA weight	/	20.70
Supplement for moisture content test requiring pre-drying.	TE-SN-03	/	/	13.40
<b>Identification of individual seeds</b>				
Visual identification by species.	ID-IS-01	/	/	34.60

Physiological quality

		Size	Duration	Price
<b>Germination test on 400 seeds</b>				
Corn, Sorghum.	GE-FG-01-4	1 250	/	51.00
<b>Germination test on 200 seeds</b>				
Corn, Sorghum.	GE-FG-01-2	500	/	41.80
<b>Vigour tests</b>				
Cold-test on 400 seeds.	GE-CO	1 250	/	69.00
Cold-test on 200 seeds.	GE-CO2	500	/	44.30
Accelerated ageing of 200 seeds including germination capacity.	GE-VIEI-2	500	/	90.00
Radicle emergence test on 200 seeds (ISTA test) - <b>Corn.</b>	GE-EM	/	/	77.00
<b>Corn</b> root length evaluation after 7 days germination at 15°C (4 replicates of 20 seeds).	GE-RAC	/	/	77.00

Mycology - See p.8 "Seed health"

		Size	Duration	Price
<b>Corn</b>				
<b><i>Bipolaris zeicola</i> (<i>Helminthosporium carbonum</i>), <i>Fusarium</i> (section <i>Liseola</i> and other sections), <i>Cephalosporium</i> sp., <i>Cochliobolus heterostrophus</i> (<i>Helminthosporium maydis</i>), <i>Stenocarpella maydis</i> (<i>Diplodia maydis</i>), <i>Stenocarpella macrospora</i> (<i>Diplodia macrospora</i>), <i>Colletotrichum graminicola</i>, <i>Nigrospora</i> sp.</b>				
Agar method with superficial disinfection. <b>UNTREATED seeds only.</b>	PA-ES-MAID	400	19 days	110.00
Agar method without superficial disinfection. <b>Treated seeds only.</b>	PA-ES-MAI	400	19 days	106.00
<b><i>Ustilago maydis</i> (<i>Mycosaecoma maydis</i>), <i>Sporisorium reilianum</i> (<i>Sphacelotheca reiliana</i>)</b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-CH-MAIS	500	15 days	102.00
<b><i>Sclerospora</i> spp., <i>Sclerophtora</i> spp., <i>Peronosclerospora</i> spp.</b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-MI-MAIS	500	15 days	102.00



# Corn and sorghum

## Mycology - See p.8 "Seed health"

### Sorghum

*Bipolaris oryzae* (*Helminthosporium oryzae*), *Bipolaris cookei* (*Helminthosporium sorghicola*), *Fusarium* section *liseola*, *Fusarium* (other sections), *Macrophomina phaseolina*, *Helminthosporium* sp.

Agar method.

	Size	Duration	Price
PA-ES-SOR	400	19 days	106.00

## Virology - Uncoated seeds only

### Corn - Detection of 1 pathogen

#### Maize chlorotic mottle virus (MCMV)

ELISA on plantlets.

	Size	Duration	Price
PA-VI-66	1 000	37 days	317.00

#### Maize dwarf mosaic virus (MDMV)

ELISA on plantlets.

PA-VI-44	1 000	37 days	317.00
----------	-------	---------	--------

#### Wheat high plains virus (WHPV)

ELISA on plantlets.

PA-VI-62	1 000	37 days	317.00
----------	-------	---------	--------

#### Sugarcane mosaic virus (SCMV)

ELISA on plantlets.

PA-VI-89	1 000	37 days	317.00
----------	-------	---------	--------

#### Wheat streak mosaic virus (WSMV)

ELISA on plantlets.

PA-VI-92	1 000	37 days	317.00
----------	-------	---------	--------

### Corn - Detection of 2 pathogens. Specify the 2 required viruses

#### MCMV/MDMV/SCMV/WSMV

ELISA on plantlets.

PA-VI-59	1 000	37 days	469.00
----------	-------	---------	--------

### Corn - Detection of 3 pathogens. Specify the 3 required viruses

#### MCMV/MDMV/SCMV/WSMV

ELISA on plantlets.

PA-VI-96	1 000	37 days	585.00
----------	-------	---------	--------

### Corn - Detection of 4 pathogens

#### MCMV/MDMV/SCMV/WSMV

ELISA on plantlets.

PA-VI-54	1 000	37 days	827.00
----------	-------	---------	--------

## EVALUATION OF VARIETIES

### Genotyping by protein profiling

#### Corn

Varietal comparison by isoenzyme electrophoresis.

BI-G-EL-COMP-M	Contact BioGEVES
----------------	------------------

Hybrid Conformity by isoenzyme electrophoresis.

BI-G-EL-CONF-M	Contact BioGEVES
----------------	------------------

Description of a lineage for 19 loci out of 4 seedlings.

BI-G-EL-DVAR-M-19	Contact BioGEVES
-------------------	------------------

Description of a lineage for 14 loci out of 4 seedlings.

BI-G-EL-DVAR-M-14	Contact BioGEVES
-------------------	------------------

Identity check test of a line or a hybrid in relation to genitors declared for 14 loci out of 10 grains.

BI-G-EL-CID-M-10	Contact BioGEVES
------------------	------------------

Identity check test of a line or a hybrid in relation to genitors declared for 14 loci out of 30 grains.

BI-G-EL-CID-M-30	Contact BioGEVES
------------------	------------------

Purity control by iso-enzymatic electrophoresis - 14I.

BI-G-EL-PUR-M-14	Contact BioGEVES
------------------	------------------

Purity control by iso-enzymatic electrophoresis - 19I.

BI-G-EL-PUR-M-19	Contact BioGEVES
------------------	------------------

### Genotyping by molecular biology

#### Corn, Sorghum

Varietal identity control - SSR.

BI-G-BM-SSR-CID-1	Contact BioGEVES
-------------------	------------------

Varietal purity analysis - SSR - 90 seeds.

BI-G-BM-SSR-PUR-90	Contact BioGEVES
--------------------	------------------

#### Corn

Hybrid conformity - SSR.

BI-G-BM-SSR-CONF	Contact BioGEVES
------------------	------------------

## Technological quality: biochemicals tests

### Sorghum

Tannin content (assay by spectrophotometry).

	Size	Duration	Price
BI-B-SPEC-TAN		Contact BioGEVES	

# Corn and sorghum

Detection, identification and quantification of GMOs			
	Size	Duration	Price
<b>Corn</b>			
Detection of the adventitious presence of GMOs in raw products (seeds, grains). List of methods available on request.	BI-D-OGM	Contact BioGEVES	
Identification and quantification of GMO events (COFRAC). List of methods available on request.	BI-D-OGM2	Contact BioGEVES	

Field tests by SEV			Price
DUS testing - Corn.	SEV-DHS-MAIS		1235.00
DUS testing - Sorghum.	SEV-DHS-SOR		1235.00

PUBLICATIONS (Contact SNES)	
<b>Germination analysis technical sheet</b>	
Evaluation of Corn seedlings.	GE-FAP-ZM
<b>Technical sheet for analysis of specific purity and counting of all other seeds</b>	
<i>Zea mays</i> .	AP-C-6
<b>Identification data sheet of seeds and other impurities</b>	
<i>Sorghum bicolor</i> .	AP-C-17
<b>Collection of seeds</b>	
Weed's identification for <i>Zea mays</i> analysis.	APCS-ZEA-M

## SEED QUALITY

## Physical quality

		Size	Duration	Price
<b>Thousand-seed weight (on purity test performed by SNES)</b>				
Thousand-seed weight on pure seeds.	MMS-01	/	/	33.00
<b>Purity analysis test</b>				
Purity - <b>Sunflower, Soybean.</b>	PU-IS-02	ISTA weight	/	25.80
Purity - <b>Cabbage-Turnip, Rapeseed, Rutabaga.</b>	PU-IS-17	ISTA weight	/	38.20
Percentage of a specific type of other seeds. <b>Specify the search to be performed.</b>	PU-CONS1	/	/	9.00
Percentage of a specific type of inert materials. <b>Specify the search to be performed.</b>	PU-CONS2	/	/	9.00
Supplement for purity analysis if received as raw seeds.	PU-LB-SUP		Contact SNES	
<b>Counting of all other seeds</b>				
Full counting - <b>Soybean.</b>	SP-IS-02	ISTA weight	/	25.80
Full counting - <b>Sunflower.</b>	SP-IS-15	ISTA weight	/	70.00
Full counting - <b>Cabbage-Turnip, Rapeseed, Rutabaga.</b>	SP-IS-16	ISTA weight	/	119.00
Counting of other seeds on purity weight. Indication of the number of other seeds in the specific purity test.	PU-SP-01	/	/	13.40
<b>Limited counting of all other seeds</b>				
Searching of 1 to 4 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-01	ISTA weight	/	64.00
Searching of 5 to 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-02	ISTA weight	/	102.00
Searching of more than 8 species (except for <i>Orobanchaceae</i> ). <b>Indicate the name of the species to be searched.</b>	SP-LI-20		Contact SNES	
Searching of <i>Orobanche</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO	ISTA weight	/	75.00
Searching of <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-STRIGA	ISTA weight	/	75.00
Searching of <i>Orobanche</i> sp. and <i>Striga</i> sp. <b>Only on UNTREATED and UNCOATED seeds.</b> Analyse performed on a separate, sealed, submitted subsample.	SP-ORO-STR	ISTA weight	/	110.00
<b>Moisture content - Provide seeds in watertight bags from which as much air as possible has been extracted</b>				
Oven method.	TE-SN-01	ISTA weight	/	20.70
Supplement for moisture content test requiring pre-drying.	TE-SN-03	/	/	13.40
<b>Identification of individual seeds</b>				
Visual identification by species.	ID-IS-01	/	/	34.60

## Physiological quality

		Size	Duration	Price
<b>Germination test on 400 seeds</b>				
Sunflower.	GE-FG-16-4	1 250	/	55.00
Rapeseed, Mustard, Turnip Rape.	GE-FG-17-4	1 250	/	54.00
<b>Germination test on 200 seeds</b>				
Sunflower.	GE-FG-16-2	500	/	45.70
Rapeseed, Mustard, Turnip Rape.	GE-FG-17-2	500	/	41.60
<b>Vigour test</b>				
Cold Test (400 seeds) - <b>Sunflower.</b>	GE-CO-TO-4	1 250	/	69.00
Cold Test (200 seeds) - <b>Sunflower.</b>	GE-CO-TO-2	500	/	44.30
Vigour test - Early count in cold (200 seeds) - <b>Sunflower</b> .	GE-EM-TO	/	/	37.10
Controlled deterioration of 200 seeds including germination capacity.	GE-DET-1	500	/	90.00
Radicle emergence test on 200 seeds (ISTA test) - <b>Rapeseed.</b>	GE-EM	/	/	77.00
Conductivity test on 200 seeds on ISTA species. <i>The moisture content of seeds should be between 10 and 14 %, sample must be send in a sealed foil sachet with the indication of the water content, otherwise it would be determined by us before the test and invoiced (see test TE-SN-01).</i>	GE-CON-GLO	500	/	57.00

Bacteriology - Uncoated seeds only

		Size	Duration	Price
<b>Rape - Detection of 1 pathogen</b>				
<b><i>Xanthomonas campestris</i> pv. <i>campestris</i> (Xcc)</b>				
Agar method + pathogenicity test in case of suspect colonies (ISTA 7-019a without counting of colonies).	PA-BA-04	30 000	36 days	220.00
Agar method + counting of colonies + pathogenicity test in case of suspect colonies (ISTA 7-019a).	PA-BA-03	30 000	36 days	232.00
<b>Disinfected seeds</b> . Grinding + agar method + pathogenicity test in case of suspect colonies (ISTA 7-019b without counting of colonies).	PA-BA-105	30 000	36 days	262.00
<b>Disinfected seeds</b> . Grinding + agar method + counting of colonies + pathogenicity test in case of suspect colonies (ISTA 7-019b).	PA-BA-05	30 000	36 days	276.00
<b><i>Xanthomonas campestris</i> pv. <i>armoraciae</i> (<i>raphani</i>) (Xca)</b>				
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-29	30 000	36 days	211.00
<b>Disinfected seeds</b> . Grinding + agar method + pathogenicity test in case of suspect colonies.	PA-BA-30	30 000	36 days	262.00
<b><i>Pseudomonas syringae</i> pv. <i>maculicola</i> (Psm)</b>				
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-10	30 000	36 days	225.00
<b>Disinfected seeds</b> . Grinding + agar method + pathogenicity test in case of suspect colonies.	PA-BA-33	30 000	36 days	266.00
<b>Rape - Detection of 2 pathogens</b>				
<b>Xcc + Xca</b>				
Agar method + pathogenicity test in case of suspect colonies (ISTA 7-019a without counting of colonies for Xcc and Xca).	PA-BA-06	30 000	36 days	266.00
<b>Disinfected seeds</b> . Grinding + agar method + pathogenicity test in case of suspect colonies (ISTA 7-019b without counting of colonies for Xcc).	PA-BA-07	30 000	36 days	316.00
<b>Xcc + Psm</b>				
Agar method + pathogenicity test in case of suspect colonies colonies (ISTA 7-019a without counting of colonies for Xcc).	PA-BA-45	30 000	36 days	324.00
<b>Xca + Psm</b>				
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-46	30 000	36 days	324.00
<b>Rape - Detection of 3 pathogens</b>				
<b>Xcc + Xca + Psm</b>				
Agar method + pathogenicity test in case of suspect colonies colonies (ISTA 7-019a without counting of colonies for Xcc and Xca).	PA-BA-08	30 000	36 days	378.00
<b>Sunflower</b>				
<b><i>Pseudomonas syringae</i> pv. <i>helianthi</i></b>				
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-87	5 000	36 days	278.00
<b><i>Pseudomonas cichorii</i></b>				
Agar method + pathogenicity test in case of suspect colonies.	PA-BA-122	5 000	36 days	284.00

Mycology - See p.8 "Seed health"

		Size	Duration	Price
<b>Rape</b>				
<b><i>Leptosphaeria maculans</i> and/or <i>Plenodomus biglobosus</i> (<i>Phoma lingam</i>), <i>Alternaria brassicae</i>, <i>Alternaria brassicicola</i>, <i>Alternaria japonica</i>, <i>Sclerotinia sclerotiorum</i>, <i>Botrytis cinerea</i>, <i>Phoma</i> sp.</b>				
Agar method (derivated from ISTA method 7-004).	PA-ES-CHO	400	19 days	106.00
<b><i>Leptosphaeria maculans</i> and/or <i>Plenodomus biglobosus</i> (<i>Phoma lingam</i>)</b>				
Agar method (ISTA 7-004).	PA-PH-CHO	1 000	25 days	262.00
<b><i>Albugo candida</i></b>				
Seed wash method. <b>UNTREATED</b> seeds only.	PA-ALB-CHO	500	15 days	102.00
<b><i>Hyaloperonospora parasitica</i> (downy mildew)</b>				
Seed wash method. <b>UNTREATED</b> seeds only.	PA-MI-CHO	500	15 days	102.00
Grow-out method (viability testing).	PA-MICHOGO	400	42 days	129.00
<b>Carnation</b>				
<b><i>Alternaria papavericola</i> (<i>Helminthosporium papaveris</i>), <i>Fusarium</i> (all sections), <i>Botrytis</i> sp., <i>Alternaria</i> sp.</b>				
Agar method.	PA-ES-OEI	400	19 days	106.00
<b>Sunflower</b>				
<b><i>Botrytis cinerea</i>, <i>Sclerotinia sclerotiorum</i>, <i>Alternariaster helianthi</i> (<i>Alternaria helianthi</i>)</b>				
Blotter method derivated from ISTA method 7-003.	PA-ES-TOU	400	23 days	139.00

## Mycology - See p.8 "Seed health"

		Size	Duration	Price
<b>Sunflower</b>				
<b>Botrytis cinerea</b>				
Blotter method (ISTA 7-003). <b>UNTREATED seeds only.</b>	PA-BOT-TOU	400	23 days	139.00
<b>Phomopsis helianthi (Diaporthe helianthi), Botrytis cinerea, Sclerotinia sclerotiorum, Alternaria helianthi (Alternaria helianthi)</b>				
Agar method with superficial disinfection. <b>UNTREATED seeds only.</b>	PA-PHOTOUD	400	23 days	110.00
Agar method without superficial disinfection. <b>Treated seeds only.</b>	PA-PHO-TOU	400	23 days	106.00
<b>Puccinia helianthi (rust)</b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-RO-TOU	500	15 days	102.00
<b>Septoria helianthi (leaf spot)</b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-SEP-TOU	500	15 days	102.00
<b>Pustula tragopogonis (Albugo tragopogonis) (white rust)</b>				
Seed wash method. <b>UNTREATED seeds only.</b>	PA-ALB-TOU	500	15 days	102.00
<b>Plasmopara halstedii</b>				
Real time SE-PCR (COFRAC - ANA/PAT/QS/MY/MO/008).	PA-MY-PLAS <b>NEW</b>	1 000	10 days	254.00

## EVALUATION OF VARIETIES

## Varietal resistance

		Size	Duration	Price
<b>Rapeseed</b>				
<b>Plasmodiophora brassicae</b> pathotypes P1+ / P1- / P2+ or P2-				
Official protocol.	PA-R-COLZA	45	/	288.00
<b>Identification of Plasmodiophora brassicae</b> pathotype				
From galls, per sample.	PA-RIDPLA1	/	/	469.00
From soil, per sample.	PA-RIDPLA3	/	/	704.00
<b>Sunflower</b>				
<b>Plasmopara halstedii</b> races 100 / 304 / 307 / 314 / 334 / 703 / 704 / 710 / 714 / 774 or 714-Pl8				
Official protocol on 30 plants (hybrids).	PA-R-TOURN1	45	/	117.00
Official protocol on 60 plants (lines).	PA-R-TOURN2	90	/	203.00
<b>Plasmopara halstedii</b>				
Identification of the race.	PA-ID-PLA	/	/	377.00
Resistance to OXTP, by isolate.	PA-RIDPLA2	/	/	102.00

Different prices outside test periods. Contact SNES for information on the periods according to the species.

## Genotyping by protein profiling

		Size	Duration	Price
<b>Rapeseed</b>				
Varietal comparison by isoenzyme electrophoresis.	BI-G-EL-COMP-C		Contact BioGEVES	
Hybrid conformity by isoenzyme electrophoresis.	BI-G-EL-CONF-C		Contact BioGEVES	
Description of a variety for 6 loci out of 10 seedlings.	BI-G-EL-DVAR-C		Contact BioGEVES	
Purity test of a batch for 6 loci out of 100 seedlings.	BI-G-EL-PUR-C-100P		Contact BioGEVES	

## Genotyping by molecular biology

		Size	Duration	Price
<b>Rapeseed</b>				
Hybrid conformity - SSR.	BI-G-BM-SSR-CONF		Contact BioGEVES	
<b>Rapeseed, Sunflower</b>				
Varietal purity analysis - SSR - 90 seeds.	BI-G-BM-SSR-PUR-90		Contact BioGEVES	
Varietal identity control - SSR.	BI-G-BM-SSR-CID-1		Contact BioGEVES	

## Technological quality : biochemicals tests

		Size	Duration	Price
<b>Camelina, Rapeseed, Sunflower</b>				
Fatty acid composition (CPG method).	BI-B-CPG-AG		Contact BioGEVES	

Technological quality : biochemicals tests			
	Size	Duration	Price
<b>Camelina, Rapeseed, White and brown Mustard</b>			
Glucosinolate content (HPLC method).	BI-B-HPLC-GLU-1		Contact BioGEVES
Glucosinolate content (NIRS).	BI-B-NIRS-GLU		Contact BioGEVES
Protein content (NIRS).	BI-B-NIRS-P		Contact BioGEVES
Oil content (NIRS).	BI-B-NIRS-H		Contact BioGEVES
<b>Rapeseed</b>			
Glucosinolate content on whole plants or parts of plants (HPLC).	BI-B-HPLC-GLU-2		Contact BioGEVES
<b>Rapeseed, Sunflower</b>			
Oil content (NMR).	BI-B-RMN-H		Contact BioGEVES

Detection, identification and quatification of GMOs			
	Size	Duration	Price
<b>Rapeseed</b>			
Detection of the adventitious presence of GMOs in raw products (seeds, grains). List of methods available on request.	BI-D-OGM1		Contact BioGEVES
Identification and quantification of GMO events. List of methods available on request.	BI-D-OGM3		Contact BioGEVES

Field tests by SEV			
			Price
DUS testing - <b>Rapeseed</b> .	SEV-DHS-COL		1430.00
DUS testing - <b>Sunflower</b> .	SEV-DHS-TOU		1235.00
DUS testing - <b>Brown mustard</b> .	SEV-DHS-MOU	NEW	1235.00
Checking the pollen beetles trap characteristic - <b>Rapeseed</b> . Contact patrick.bagot@geves.fr	SEV-COL-MEL		/

PUBLICATIONS (Contact SNES)			
<b>Method sheet</b>			
Vigour testing – <b>Rapeseed</b> .			VIG-1-M
Vigour testing - Conductivity - <b>Pea</b> .			VIG-2-M
Germination method of <b>Rapeseed</b> .			GE-M-COL
<b>Germination analysis technical sheet</b>			
Evaluation of <b>Sunflower</b> seedlings.			GE-T-TOU
Evaluation of <b>Rapeseed</b> seedlings.			GE-FAP-BN
<b>Technical sheet for analysis of specific purity and counting of all other seeds</b>			
<i>Helianthus annuus</i> .			AP-C-2
<i>Glycine max</i> .			AP-C-3
<i>Brassica napus</i> .			AP-C-4
<b>Identification data sheet of seeds and other impurities</b>			
<i>Chenopodium</i> sp., <i>Atriplex</i> sp., <i>Amaranthus</i> sp., <i>Reseda</i> sp., <i>Myosotis</i> sp.			AP-A-04
<i>Claviceps purpurea</i> - <i>Sclerotinia sclerotiorum</i> .			AP-P-2
<b>Collection of seeds</b>			
Weed's identification for <b>Brassica napus</b> analysis.			APCS-BRA-N
Weed's identification for <b>Helianthus annuus</b> analysis.			APCS-HEL-A



# Micro-cleaning

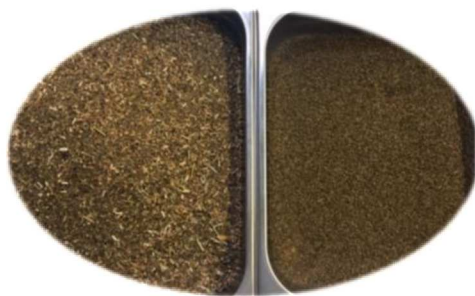
Micro-cleaning of seed lots consists in determining the percentage of waste in raw seed lots, from a harvest, using sorting machines, laboratory replicates of industrial machines.

This activity enables the establishment of an optimal sorting diagram for the seed lot. It is an essential step in defining the industrial process for quality sorting in the factory, whatever the species. Moreover, the commercial value of a lot is estimated through precise knowledge of its quality.

## HOW IT IS DONE ?

Each species has his own morphological characteristics. Each morphological characteristic is associated with a sorting device, which settings are adjusted very precisely.

The complete sorting of a seed lot is carried out on a sorting line composed of several sorting machines ensuring complementarity on many criteria. In order to achieve the defined standards, the knowledge of characteristics, the expertise and the know-how of operators are essential.



Sorting on a raw batch of carrot before/after micro-cleaning

## EQUIPMENTS

The SNES owns 20 different types of equipments in order to clean every types of seeds. Our training and expertise contribute to produce quality sorting, representative of the work provided in the factory. After the various sorting operations, analyses of specific purity and germination capacity can also be carried out at the SNES to ensure the quality of the seed lot.

		Price
Micro-cleaning. Standard protocol. <b>Beets.</b>	MN-SN-01	59.00 €
Micro-cleaning. Standard protocol. <b>Peas, Beans, Cucurbits.</b>	MN-SN-02	54.00 €
Micro-cleaning. Standard protocol. <b>Carrots.</b>	MN-SN-03	84.00 €
Micro-cleaning. Standard protocol. <b>Other vegetable crops.</b>	MN-SN-04	76.00 €
Micro-cleaning. Standard protocol. <b>Other field crop species.</b>	MN-SN-05	67.00 €
Micro-cleaning. Standard protocol. <b>Flower seeds.</b>	MN-SN-06	Contact SNES
Micro-cleaning. <b>Mixed seeds.</b>	MN-SN-07	Contact SNES
Micro-cleaning. <b>Quinoa.</b>	MN-SN-08	100.00 €
Micro-cleaning. Standard protocol. <b>Chicory</b>	MN-SN-09	76.00 €
Micro-cleaning. Standard protocol. <b>Small leguminous.</b>	MN-SN-10	68.00 €
Additional charge for lots not presorted or requiring additional sorting time.	MN-SN-11	53.00€/h
Supplement fee. Details of each grid with percentage results.	MN-SUP	12.60€

Requests for information: [contact.mn@geves.fr](mailto:contact.mn@geves.fr)

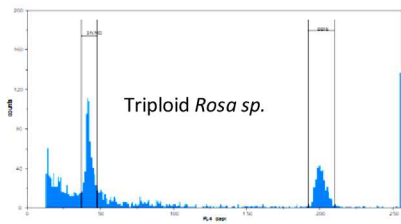
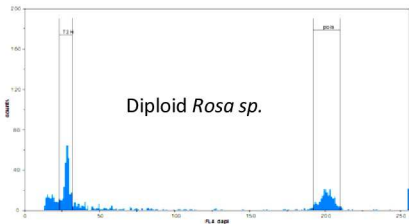
## Evaluation of ploidy level from plants or seeds.

Cytology analyses carried out by the SNES aim to determine the level of ploidy by chromosome counting of root meristematic cells and/or flow cytometry. Ploidy defines the number of chromosome copies of a cell. The level of ploidy is characteristic of the species or variety. These analyses can be carried out from seeds or from plants on many species.

### FLOW CYTOMETRY

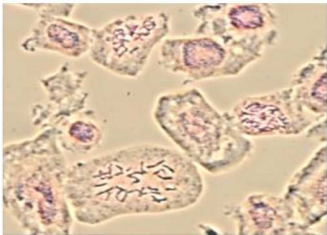
Flow cytometry is a technic based on the marking of DNA with fluorochromes. The cytometer allows a precise measurement of the amount of fluorescence emitted by the cells after marking and excitation by a light beam. The measurement of the quantity of fluorescence emitted will then be compared to a control with a known level of ploidy. This will allow to conclude on the ploidy level of the tested sample.

Flow cytometry is mainly used to determine the level of ploidy of a series of plants and variety. In some cases, flow cytometer is also used to identify species with a very similar morphology or mutilated or poorly formed seeds.

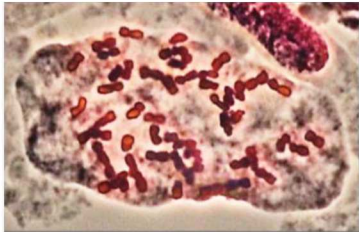


### MICROSCOPY

Chromosomal counting by microscopy is a technic that also makes it possible to define the level of ploidy. This is an essential step for species which do not have a reference for cytometry. Chromosome counting is carried out on meristematic root cells whose mitotic division has been blocked at the metaphase stage. The chromosomes are then observed and counted using a phase contrast microscope.



Metaphase cells of Festulolium



Metaphase cells of Gardenia

Requests for information or analyses: [contact.cyto@geves.fr](mailto:contact.cyto@geves.fr)

# Radiography 2D and tomography

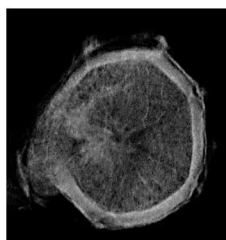
## Tools for evaluating seed quality.

### WHY USE 2D OU 3D RADIOGRAPHY?

Radiography allows the internal morphology of seeds to be visualised. The objective is to understand or predict problems of physical or germinative quality. This tool also allows the phenotyping of precise characters of interest according to the request.

### WHAT IS THE DIFFERENCE BETWEEN 2D RADIOGRAPHY AND TOMOGRAPHY?

2D radiography is a non-destructive method that allows rapid observation of different criterias on seeds (physical damages, empty seeds, insect damages, etc.). This technology allows a qualitative diagnosis of the state of the internal morphology. The Physical Analysis laboratory is ISTA accredited for these analyses.



Empty seed



Physical damages



Insect damages

3D radiography (tomography) is a technology whose method consists of generating a 3D image of the internal structure of an object. This tool applied to seeds allows the measurement of different characteristics and to obtain very precise quantitative data. The possible applications are diverse: characterisation of genotypes/varieties/batches, quantification of pathogen/insect damages, physical damages...



Evaluation of the  
quality of the coating



Quantification of insect  
damages



Quantification of  
cracks on a Corn seed

		Price
2D radiography on seeds without interpretation (per digital image).	<b>RX-IS-03</b>	<b>25.90 €</b>
2D image interpretation for internal morphological characterisation, the detection of insect/physical damage (%).	<b>RX-SUP-03</b>	<b>16.20 €</b>
Supply of one 2D image in .jpg format, for a particular determination or for measurements.	<b>RX-SUP-RA</b>	<b>1.10 €</b>
For any request for information or analysis in 3D tomography:	<b>RX-IS-05</b>	bea-tomographe@geves.fr
- Measurements of coating characteristics;		
- Insect damages detection and associated volume measurements;		
- Measurement of internal seed constituents ;		
- Measurement of seed filling rate ;		
- Detection and measurement of mechanical cracks and other damages ;		
- Other measures of interest.		
Visual or automatic image processing.	<b>RX-SUP-05</b>	bea-tomographe@geves.fr
Supply of a batch of 2D images in jpg format.	<b>RX-SUP-TO</b>	bea-tomographe@geves.fr

# Biostimulation, Biocontrol, evaluation of treatment and the realization of tests under controlled conditions



GEVES, member of the Biocontrol Consortium and RMT BESTIM, provides its expertise for the characterization and evaluation of the effect of your treatments applied to seeds or seedlings.

Whether for biocontrol or biostimulant products, physical or chemical treatments, GEVES proposes to support you in the development of suitable evaluation methodologies and/or to carry out tests under controlled conditions. For *in vitro* and/or *in vivo* screening, or for the evaluation of disinfection, protection, stimulation or phytotoxicity effects, of treatment products in preventive and/or curative application.

SNES does not supply seeds or products. The sample size to be provided is 1 000 seeds per modality for selectivity and effectiveness assays. If only effectiveness trials are required, the sample size will be determined in relation to the project and the initial request.

GEVES is a multidisciplinary team of experts in seed quality and varietal resistance evaluation. It develops new evaluation methods in these areas that are recognized internationally. With this expertise, GEVES participates in research programs on biostimulation and biocontrol of seeds.

## APPLICATION OF PRODUCTS ON SEEDS

Treatment of seeds is possible depending on the type of treatment and use. For more information, please contact SNES.  
Depending on the quantity of seeds to be treated and the formulation of the product, 3 different tools can be used: Orbital agitator (20 g, liquid formulation); Hege bowl (500 g); Satec Concept treatment machine (up to 2 kg).

		Price
Application of a seed treatment product by SNES in the case of a treatment evaluation.	GE-APPLI	46.00

## SELECTIVITY TESTS

		Price
To check the selectivity of a treatment, the germination test should be determined on 400 seeds.		
Vegetables.	GE-FG-18-4	65.00
Cereals.	GE-FG-01-4	51.00
Oilseeds.	GE-FG-17-4	54.00
The percentage of seedlings showing phytotoxicity symptoms can be provided specifically.		
All species.	GE-FG-PCPL	23.10

## EVALUATION OF TREATMENTS FOR SEED AND PLANT PROTECTION

		Contact
Evaluation of phytochemical products.	PA-EVAL-CHI	geoffrey.orgeur@geves.fr
Evaluation of biocontrol products, physical treatments and disinfection process.	PA-EVAL-BIO	

## Few examples of available pathosystems<sup>4</sup>

Wheat	<i>Microdochium nivale</i> <i>Tilletia caries</i> . <i>Fusarium</i> spp. ( <i>Fusarium graminearum</i> , <i>Fusarium avenaceum</i> , <i>Fusarium culmorum</i> ). <i>Puccinia striiformis</i> , <i>Puccinia triticina</i> . <i>Pythium irregulare</i>	Maize	<i>Fusarium graminearum</i> . <i>Fusarium verticillioides</i> . <i>Pythium ultimum</i> . <i>Rhizoctonia solani</i>
		Sunflower	<i>Botrytis cinerea</i> <i>Plasmopara halstedii</i> . <i>Verticillium dahliae</i> . <i>Fusarium moniliforme</i> .
Rapeseed	<i>Plasmidiophora brassicae</i> . <i>Phoma lingam</i> . <i>Fusarium oxysporum conglutinans</i> . <i>Alternaria brassicicola</i> .	Cabbage	<i>Hyaloperonospora brassicae</i> .
Beet	<i>Aphanomyces cochlioides</i> . <i>Pythium</i> sp.	Lettuce	<i>Fusarium oxysporum</i> race 1 et 4.
		Tomato	<i>Meloidogyne incognita</i> .

<sup>4</sup>Available pathosystems presented in evaluation of varieties as well as in seed health quality are all adaptable for evaluation of treatments.

## EVALUATION OF BIOSTIMULANT PRODUCTS FOR GERMINATION AND/OR SEEDLING GROWTH

Two types of trials can be performed either under favourable conditions for the plant species (i.e. those applied in selectivity trials), or under penalizing conditions (i.e. abiotic stress).

		Price / Contact
Monitoring of seed germination on 200 seeds		
Germination energy (intermediate count; in addition to germination capacity ).	GE-EG	19.900
Counting dates for energy vary according to the species.		
Germination kinetics by image analysis (average rate of germination, kinetic curve).	GE-CI	sylvie.ducournau@geves.fr
Seedling development tests		
Corn root length evaluation after 7 days germination at 15°C (4 replicates of 20 seeds).	GE-RAC	77.00
Dry biomass of 4 replicates of 20 seedlings after germination test.	GE-BIOM	55.00
Total length and root classification per diameter (4 replicates of 20 seedlings).	GE-CLASS NEW	75.00
Growth kinetics by image analysis (Eloncam bench).	GE-ELON	sylvie.ducournau@geves.fr



# Disease test supplies : inoculum and reference material

The available pests are listed on [www.geves.fr](http://www.geves.fr). Specific preparation of isolate can also be done in the form of inoculum or artificially contaminated seeds.  
Warning: For the handling of quarantine pests, laboratories must be authorised to hold (Regulation 2019/829)

## Pests' inoculum (contact SNES)

	Price
<b>Specific preparation</b>	
Suspension of <i>Ditylenchus dipsaci</i> larvae (exemple of price: 1 335€ to inoculate 9000 plants).	PA-AD-DIT /
<b>Beet</b> seedlings contaminated with viruliferous aphids <i>Myzus persicae</i> carrying yellowing virus BChV ( <i>Beet chlorosis virus</i> ).	PA-AD-MYZ /
<b>Other isolates and inoculum</b>	
One tray of 140 seedlings infected by a race of stripe/yellow rust ( <i>Puccinia striiformis</i> ). Contact <a href="mailto:jean-philippe.maigniel@geves.fr">jean-philippe.maigniel@geves.fr</a> .	PA-AD-ROU2 130.00
Inoculum supplied in Petri dishes.	PA-AD-INOC /
Inoculum supplied as contaminated cotyledons, plants or fresh leaves.	PA-AD-INOP /
Inoculum supplied in artificially contaminated grains that have lost germination capacity or artificially contaminated seeds that have maintained a germination capacity.	PA-AD-INOG /
Inoculum supplied in liquid suspension.	PA-AD-INOL /
Cyst of <i>Globodera pallida</i> <sup>40</sup> or <i>Globodera rostochiensis</i> <sup>40</sup> .	PA-AD-GLO /
Cyst of <i>Heterodera schachtii</i> .	PA-AD-HET /

## Reference material : isolates and seeds

	Price
<b>Bioagressors isolates</b>	
Specific preparation of reference isolate in Petri dishes (2 dishes/strain), dessicated (Bos) (1 g) or population of free living nematodes or cysts (around 20).	PA-AD-FOU 168.00
Specific preparation of 5 g of galls of <i>Meloidogyne incognita</i> (for inoculation of 15 to 20 plantlets).	PA-AD-MEL 180.00
Specific preparation of 5 g of galls of <i>Plasmodiophora brassicae</i> (for inoculation of 50 to 100 plantlets).	PA-AD-PLAD 180.00
<b>Specific preparation</b>	
100 mg of a vial of spores of stripe rust ( <i>Puccinia striiformis</i> ) or brown rust ( <i>Puccinia recondita</i> ) or crown rust ( <i>Puccinia coronata</i> ).	PA-AD-ROU 62.00
<b>Specific preparation</b>	
50 to 100 seeds of germinated <b>Sunflower</b> seeds contaminated by <i>Plasmopara halstedii</i> (downy mildew).	PA-AD-TOU2 180.00
<b>Lettuce</b> seedlings infected with 1 race of <i>Bremia lactucae</i> , 30 cotyledons in the test period.	PA-AD-BREM 180.00
<i>Erysiphe pisi</i> , 2 seedlings with presence of sporulation.	PA-AD-ERYS 180.00
2 cotyledons of <b>Melon</b> infected by 1 race of <i>Golovinomyces cichoracearum</i> (powdery mildew).	PA-AD-GOL 180.00
2 cotyledons of <b>Melon</b> infected by 1 race of <i>Podosphaera xanthii</i> (powdery mildew).	PA-AD-POD 180.00
2 <b>Lettuce</b> seedlings infected with <i>Nasonovia ribisnigri</i> race Nr: 0 with presence of apterae.	PA-AD-NAS 180.00
30 leaves of <b>Basil</b> contaminated by <i>Peronospora belbahri</i> .	PA-AD-BEL 180.00
<b>Controls/differential hosts vegetables (MATREF) for one sowing unit (1 g for Bremia, 200 seeds for other pathogens)</b>	
Complete pack of differential hosts for <i>Bremia</i> of <b>Lettuce</b> .	PA-HD-BLAI 366.00
Carrot.	PA-HD-CAR 50.00
Squash.	PA-HD-COU 88.00
Watermelon.	PA-HD-PAS 88.00
Bean.	PA-HD-HAR 69.00
Lettuce.	PA-HD-LAI 69.00
Corn salad.	PA-HD-MAC 50.00
Melon.	PA-HD-MEL 88.00
Capsicum.	PA-HD-PIM 101.00
Pea.	PA-HD-POI 69.00
Tomato.	PA-HD-TOM 88.00
Tomato Rootstock.	PA-HD-PGTO 101.00

INTER-LABORATORY PROFICIENCY TESTS (ILPT)

Inter-laboratory proficiency testing (ILPT) is used to evaluate the ability of a laboratory to perform a method.  
For more information, visit our website [www.geves.fr](http://www.geves.fr).

The organisation of comparative tests includes planning and delivery of documents to participants, preparation of samples, definition of a reference, interpretation of results and issuing of a final report.  
Not included : supply of seeds cost (billed at actual price).

Inter-laboratory proficiency tests – PT & Other comparisons

	Price	Contact
Purity – <b>All species</b> (based on 15 participants) – by sample.	186.00	
Germination – <b>All species</b> (based on 15 participants) – by sample.	128.00	
Moisture content – <b>All species</b> (based on 15 participants) – by sample.	81.00	
Thousand-seed weight – <b>All species</b> (based on 15 participants) – by sample.	75.00	Fabienne BRUN
Seed health.	Contact SNES	eil.semences@geves.fr
Organisation of inter-laboratory comparisons tests on request.	Contact SNES	
Supply of reference samples for internal laboratory control.	Contact SNES	
Expertise in the case of atypic results on seeds assay or deviation found (control card for recognized laboratories).	Contact SNES	

AUDITS

According to various standards (ISTA, recognition in the context of certification), laboratory audits can be carried out to analyse your organisation.  
One-day audit includes an analysis of a pre-audit file, the conducting of the audit as well as the audit report.  
Contact : Fabienne BRUN (audit.semences@geves.fr).

REFERENCE MATERIALS AND DOCUMENTS SUPPLIES

Find all our publications and reference materials in the different chapters of the price list and on our website [www.geves.fr](http://www.geves.fr).

TRAININGS - EXPERTISES

	Price	Contact
<b>To apply for training</b>		
Technichal training with SNES.	Contact SNES	Fabienne BRUN
Seed quality analysis, inter or in-company, at SNES or on-site.		formation.semences@geves.fr
Technichal training with BioGEVES.	Contact SNES	biogeves.analyses@geves.fr
Technichal training with SEV.	Contact SNES	rachel.tessier@geves.fr
<b>For the setting up of an expertise in an international context</b>		
Technical expertise and visit.	Contact SNES	secretariat.direction@geves.fr
<b>Collective reading of results</b>		
Collective reading of germination results, details of abnormal and debriefing of the results reading, per sample.	GE-LECT	102.00 lnr.semences@geves.fr



# Terms and Conditions

## Article 1 – General Information

The present general terms and conditions of sale apply for services which appear in the GEVES price list (Variety and Seed Study and Control Group), public interest group governed by the constitutive convention of July 17, 1989, having made the object of an approval order dated July 17, 1989 and its modified constitutive convention of April 17, 2014 whose head office is located 25 rue George Morel, CS 90024, 49071 Beaucozéd Cedex FRANCE.

The main official missions of GEVES are to conduct studies or analyses of:

- characterization and/or identification of varieties,
- agronomic quality of varieties,
- physical, physiological and sanitary control of seed.

## Article 2 - Object and field of application

The analyses carried out within the framework of any order are in accordance with the present general terms of sale.

The placing of an order implies full acceptance of these general terms of sale which prevail on any other document of the customer, unless otherwise agreed between the customer and GEVES.

Geves reserves itself the right to modify the present general terms of sale.

## Article 3 - Orders

### 3-1) Order taking

The orders are definitive only when the present general terms of sale are full accepted by the legal representative of the customer or any person duly appointed for that purpose.

The customer has to respect the terms of the supply of material described in the GEVES price list.

### 3-2) Modification of the order

The terms of the orders transmitted to GEVES are irrevocable for the customer, except written acceptance from GEVES. On this assumption, GEVES will not be held anymore by the deadlines agreed upon at the moment of the initial order.

### 3-3) Refusal of order

If a customer places an order to GEVES, without having carried out the payment of preceding orders despite reminder from GEVES, GEVES can repudiate the order, without the customer being able to claim any allowance, whatever the reason.

GEVES reserves itself the right to refuse any order.

## Article 4 - Delivery of the results

### 4-1) Delivery time

The delivery time of the results are given only on a purely informative and indicative basis; those depending in particular on arrival of the orders, the respect of the conditions of preparation of the samples sent by the customer (weight, number, packing for example), request for more information, or complementary analyses. For each service, useful information is available on the GEVES website ([www.geves.fr](http://www.geves.fr)). In any assumption, the delivery within the deadlines can intervene only if the customer is up to date of his obligations with GEVES.

GEVES shall endeavor to meet agreed deadlines with the customer.

Delays of delivery of results cannot lead to any penalty or allowance, nor to justify the cancellation of the order.

### 4-2) Terms

The delivery of the results is made by paper form or by electronic way.

### 4-3) Complaints

The complaints are to be forwarded to the customer service of GEVES whose contacts appear in the GEVES price list. GEVES acknowledges to the customer the receipt of the complaint, deals with it and defines an appropriate treatment as soon as possible. GEVES shall inform the plaintiff of the progress of the claim and the conclusions.

## Article 5 - Return

Except explicit indication of the customer validated by the customer service of GEVES whose references are indicated on the GEVES price list, no material submitted for analysis will be returned to the customer.

## Article 6 - Guarantee - Liabilities

### 6-1) Scope

GEVES provides services. As such, GEVES is under the obligation of best effort. It could not be held responsible for non-satisfactory results from the point of view of the customer, for causes of which it does not have the control. GEVES will have, if necessary, to issue reserves on the results.

### 6-2) Exclusions

If the elements provided by the customer do not allow the fulfillment of the ordered service, GEVES will inform the customer. If this situation persists, the liability of GEVES could in no way be required.

In particular, GEVES could not be held responsible for sampling (except for Orange ISTA Certificates for which GEVES is responsible for sampling), the collecting, the conditioning and the transport of the samples, which is the customer's entire liability. Moreover, the samples received at GEVES shall be in good condition of conservation and shall not present identified risk for the staff of GEVES or for the environment. When a phytosanitary treatment has been applied, the customer shall inform GEVES.

The customer waives all right to take any action against GEVES for all losses or all direct or indirect damages resulting from the services, as well as in the situation where the services of GEVES would be unsuitable for the uses of the customer.

## Article 7 - Tariff - Price

The rates applied to the orders are those indicated in the GEVES price list, unless particular conditions negotiated with GEVES.

Any order made on the basis of a quotation established by GEVES will be taken into account only after signature of the quotation, by the legal representative of the customer or any

person duly elected for that purpose.

Prices are indicated exclusive of VAT, based on current rates and will be increased by current taxes of all types on the invoicing date.

Amounts are indicated in Euros. Payments should be made in Euros.

The transport fees of the samples provided to GEVES for analysis are always at the charge of the customer.

## Article 8 - Invoicing

Any order, even if it is cancelled during the execution of the service, will give rise to an invoice. Elements of identification of the customer and ordered services are indicated on the invoices. The customer service of GEVES whose references appear in GEVES price list can be contacted for any question related to the invoice.

## Article 9 - Payment

### 9.1) – Time for payment

The maximum payment time is 60 days from the date of emission of the invoice.

### 9.2) – Terms

The payments shall be made:

- by French postal or bank check or credit or postal transfer addressed to: GEVES, 25 rue George Morel, CS 90024, 49071 Beaucozéd Cedex FRANCE
- by signed and accepted draft or promissory note.

GEVES does not authorize any discount for cash payment or on a former date to those resulting from these general terms of sale.

### 9.3) - Delay of payment

Any sum still not paid at the due date by the customer will give rise to the payment of penalties at the rate of the European Central Bank plus 10 points and a lump sum of 40 Euros for recovery costs in compliance with Decree n° 2012-1115. These penalties are payable automatically without prior notice from GEVES on the date following the due date. Moreover, GEVES reserves itself the faculty to apply to the competent court of law to stop this non-fulfillment, under penalty per day of delay.

## Article 10 - Confidentiality - Rights of ownership

GEVES guarantees the confidentiality of the results of analysis, unless the detection of a quarantine pathogen. Under such circumstances, GEVES has to communicate immediately to the qualified services of the ministry in charge of agriculture all information relating to the material in which the quarantine pathogen was identified.

This exception also applies to other situations, such as the detection of fortuitous presence of GMO, if the regulation in force imposes to GEVES to communicate information to the qualified services of the French State.

The results provided by GEVES can in no way being modified, reproduced or diffused even in a partial way, to third party, without the preliminary authorization of GEVES. Duplicates can be obtained on request at the customer service of GEVES whose references are indicated on GEVES price list.

## Article 11 - Personal data

For any processing of personal data carried out in connection with this Quotation, the Parties shall comply with Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, as transposed into French Law No 2018-493 of 20 June 2018.

Each Party represents and warrants to the other Party that it will strictly comply with GDPR for any processing of personal data in connection with this Quotation.

Personal data collected and processed by the Parties in the context of this contractual relation are necessary for its execution (legal basis). They are kept for a period of 10 years (retention period) from the date of the end of the Quotation.

## Article 12 – Agreement of proof

In accordance with Articles 1316-1 to 1316-4 of the Civil code, documents in electronic form are admitted as evidence in the same way as paper-based documents.

The Parties expressly agree that this Quotation concluded in electronic form and signed in a dematerialized way, as well as the documents relating to it:

- Constitute the original documents ;
- Are drawn up and kept under conditions that guarantee their integrity ;
- Are perfectly valid between them. As such, the Parties undertake not to challenge the validity, enforceability or probative value of this Quotation and the documents relating to it on the basis of their conclusion or transmission by electronic means ;
- Constitute written evidence within the meaning of the aforementioned Articles 1316-1 to 1316-4 of the Civil Code. Thus, this Quotation concluded by electronic means is deemed to be evidence of the content of the Quotation, of the identity of the signatories and of their consent to the obligations arising from the Quotation.

## Article 13 - Force majeure

The emergence of a case of force majeure causes the suspension of the execution of the obligations of GEVES.

## Article 14 - Attribution of jurisdiction

For all disputes relating to the services carried out by GEVES, including those relatives to the interpretation of the general terms of sale, the jurisdictions of Angers shall be qualified.

## Article 15 - Applicable law

The present general terms of sale, and any question which it would omit to treat, shall be exclusively governed by the French law.

By appending his signature on the Quotation, the customer:

- recognizes and accepts without reserve the present general terms of sale and that those will apply to all the further orders until communication of new general terms of sale by GEVES,
- declares that he has read and accepts them,
- waives its own purchasing conditions.

# OUR PUBLICATIONS • AND REFERENCE MATERIAL

## Reference Collections



## Technical Data



## Seed Control Kit



More information at **[www.geves.fr](http://www.geves.fr)**

**Contact :** [lnr.semences@geves.fr](mailto:lnr.semences@geves.fr)