



Press kit

18 January 2012 - Angers

Inauguration of the new building for the Plant Health Laboratory



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Angers, 18 January 2012

A new building for the Plant Health Laboratory

The ANSES Plant Health Laboratory (LSV), located in Angers at the heart of a “competitiveness cluster with global reach in plant sciences”, today inaugurated its new building. This has been made possible thanks to funding from France’s Ministry of Agriculture, the EU’s Regional Development Fund (managed by the Prefecture of the Pays de Loire Regional Council), the Maine et Loire Departmental Council and the Greater Angers Loire Métropole Area, and will provide the working conditions needed to enable this National Reference Laboratory to maintain the scope and reliability of its work. It offers staff optimum working conditions while blending perfectly into the local environment. The new scientific area will be able to take in young researchers for training and welcome foreign delegations or staff from other national or European laboratories.

Just like humans and animals, plants can also be the victims of a range of pathogens (viruses, bacteria, parasitic worms, fungi), as well as of insect pests and invasive plants, with serious consequences both on the economics of crop production and on preservation of biodiversity. As the National Reference Laboratory for Plant Health, the LSV develops analytical and screening methods and also undertakes research into regulated or emerging harmful organisms, to contribute to risk management in plant health. It provides technical and scientific support to government departments and participates in international scientific partnerships related to its missions. It coordinates a network of laboratories accredited to carry out official analyses concerning regulated diseases and organises inter-laboratory proficiency tests to guarantee the network’s reliability. The laboratory covers all disciplines relative to biological risks to plant health: virology, bacteriology, mycology, GMOs, nematology, entomology and invasive plants, as well as tropical pests and pathogens. It coordinates expert appraisals and risk assessment within its field of competence. It has a workforce of 80 people, spread over six separate sites.

The headquarters of the LSV are in Angers, at the heart of a “competitiveness cluster with global reach in plant sciences”. This site, in close proximity to INRA, GEVES¹, INH², the Technopole House and the future *Institut du Végétal*, enables the laboratory to forge partnerships with both regional and national research institutes (INRA, universities, the doctoral school, GEVES-SNES, FREDON³ (3), professional organisations, etc.).

As a partner of the Végépolys competitiveness cluster, the laboratory is on the technical committee that is developing the “Plant Campus”, a project to bring all the existing research teams together to form a joint research unit under the *Institut Fédératif de Recherche*’s QUASAV unit⁴ (4), in order to pool resources, develop partnerships and increase efficiency.

¹ *Groupe d'étude et de contrôle des variétés et des semences* (Study Group for the Control of Varieties and Seeds)

² *Institut National d'Horticulture et de Paysage* (National Horticulture and Landscaping Institute)

³ *Fédération Régionale de Défense contre les Organismes Nuisibles* (Regional Federation for Combating Harmful Organisms)

⁴ *Qualité et santé du végétal* (Plant Quality and Health)

With this new building, the ANSES Angers station will have a total built-up surface of 4200 m², set on one and a half hectares, including offices, areas for processing large deliveries of samples for analysis in the event of plant health emergencies, containment laboratories either standard or reinforced (Level 2) depending on use, a high-level biological containment laboratory (Level 3) for the safe handling of quarantined harmful organisms not found in Europe, chambers for plant culture and a Level 2 containment greenhouse.

These new premises have been designed to high architectural and environmental standards in terms of biosecurity, providing staff with optimum working conditions, blending perfectly into the local environment and minimising the site's ecological footprint.

Joint funding

This building project, costing 12 million Euros overall, was made possible by support from the French State (Ministry of Agriculture), the European Union *via* the European Regional Development Fund (ERDF) managed by the Prefecture of the Pays de Loire Region, the Pays de Loire Regional Council, the Maine et Loire Departmental Council and the Greater Angers Loire Métropole Area.

Key dates for the LSV

The French National Laboratory for Plant Protection (LNPPV) was originally set up in 1995 and was previously part of the Ministry of Agriculture under the Directorate General for Food (DGAL). On January 1st 2011, the LNPPV became the Plant Health Laboratory when it joined ANSES, in accordance with the general rationale of separating risk assessment from risk management, leaving the one to the Agency and the other to the Ministry, as is already the case for human and animal health issues. This follows on from the conclusions of the national consultation on the health sector held in 2010 under the auspices of the Ministry of Agriculture on plant and animal protection.



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Funding

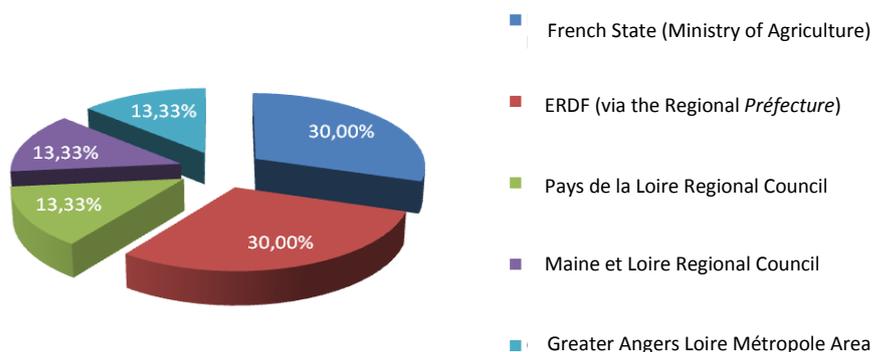
The extension to the headquarters of the Plant Health Laboratory, which is also its largest site, cost 12 million Euros.

This major real-estate operation was made possible with support from the French State (Ministry of Agriculture), the EU's Regional Development Fund (managed by the Prefecture of the Pays de Loire Region), the Pays de Loire Regional Council, the Maine et Loire Departmental Council and the Greater Angers Loire Métropole Area. With this new building, the ANSES Angers station now has a total built-up surface of approximately 4200 m², including offices, areas for processing large deliveries of samples for analysis in the event of plant health emergencies, standard or reinforced containment laboratories (Level 2) depending on use, a high-level biological containment laboratory (Level 3) for the safe handling of quarantined harmful organisms not found in Europe, chambers for plant culture and a Level 2 containment greenhouse.

Cost of the programme: €12,000,000 inc. VAT

Funding	Sum in € inc. VAT
French State (Ministry of Agriculture)	3,600,000
ERDF (via the Regional <i>Préfecture</i>)	3,600,000
Pays de Loire Regional Council	1,600,000
Maine et Loire Regional Council	1,600,000
Greater Angers Loire Métropole Area	1,600,000
TOTAL	12,000,000

Breakdown by source of funding



The architect

Architectes Rocheteau-Saillard

Founded in 1992

Presentation

Eric SAILLARD and Evelyne ROCHETEAU are government-licensed architects and partners in the architectural agency **Architectes Rocheteau-Saillard**, founded in 1992.

The agency's business covers western France and the Paris region.

The agency works principally on public buildings, with contracts won by architectural competitions. This involves a wide diversity of projects, including schools, hospitals, universities, public housing, libraries and sports facilities as well as more technical projects such as laboratories and, especially, the National Plant Protection Laboratory (LNPV).

After designing the first LNPV for which the agency was awarded the Departmental Architecture Price by the Maine et Loire *département*, it was delighted to be commissioned to design this new building, an extension to the Plant Health Laboratory.

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email: ars@rocheteau-saillard.com

Website: www.rocheteau-saillard.com

Building the new extension

Participating companies

Contracting authority

DDAF
15 rue du petit Thouars
49047 Angers cedex 01

Prime contractor

SARA
7 esplanade de la Gare
BP 90111
49101 Angers cedex 02

Programme manager

Arnaud Perrin
10 avenue Paul Appel
75014 Paris Paris

Architect

ARS
29 rue du Moulin
44000 Nantes

Design Bureau

IOSIS
111 boulevard Schumann
BP 51206
44312 Nantes Cedex 3

Technical Controller

SOCOTEC
122 rue du Château d'Orgemont
BP 50206
49002 Angers cedex 01

Safety and Health Protection

OUEST COORDINATION
ZI Angers - Beaucouzé
24 rue du Pavillon
49070 Beaucouzé

01-Roads and utilities

Luc Durand
Les Echassières
49220 Pruillé

02-Structural work

ETPO

7 rue P. Gaubert
49000 Angers

03-Metal structures

Ateliers Davis
1 rue de la Lande
BP 95238
44352 Guérande cedex

04-Roofing & waterproofing

SMAC
1 Allée au Poirier
ZI D'Ecouflant
49000 Angers

05-Cladding

SMAC
Agence de tours
10 et 12 rue de Belgique
37100 Tours

06-Metalwork

FAVREAU
ZI de l'Appentière
49280 Mazières-en-Mauges

07-External woodwork

SAS LEBLANC
1503 Avenue Jacques Cartier
44811 Saint Herblain

08-Internal woodwork

OUEST BOIS 49
Chemin du Ménil
49370 St Clément de la Place

09-Partitions and Plasterwork

SARL SIGMA
ZI Route d'Aviré
49500 Segré

10-Suspended ceilings

SARL TREMELO JP
Les Fresnais Route de Chemillé
49290 Chalonnes sur Loire

11-Hard flooring

SAS MALEINGE
Avenue de Bon Air
BP 51524
49115 Saint Pierre Montlimart

12-Soft flooring

BARBIN SARL
8 rue des Petits Frères Montgolfier
49240 Avrillé

13-Cast flooring – floor resin

MIE SOLS RESINE
34 boulevard Gaston Birgé
49100 Angers

14-Painting – Wall coverings

SAS LANDRY
7 bis rue de la Maître Ecole
49000 Angers

15-Partitions and Modular ceiling system

BATIMPRO CHARRIER SES
2 rue du Vieux Bourg
BP 2
49340 Nuaille

16-Cold storage rooms

STRADER
ZA du Tertre
49112 Pellouaille les Vignes

17-Climate-controlled chambers

STRADER
ZA du Tertre
49112 Pellouaille les Vignes

18-Specific laboratory equipment

POSSEME
1 rue du Barrage de la Née
BP 1
56200 St Martin sur Oust

19-HVAC Plumbing

Forclum Anjou Maine
Rue de la Caillardière
BP 70004
49071 Beaucouze Cedex

These companies were selected after a formal competitive procedure, issued in application of the French Government Procurement Code.

A laboratory dedicated to plant health: Expertise on biological risks and development of methods and analyses

The Plant Health Laboratory provides authoritative analyses and scientific and technical support for the French Agency for Food, Environmental and Occupational Health & Safety (ANSES), in matters of biological risks for plant health. It thus contributes to the Agency's global approach to risk assessment.

The laboratory was previously attached to the Ministry of Agriculture under the Directorate General for Food (DGAL) and joined ANSES on 1 January 2011. This was in accordance with the general rationale of separating risk assessment from risk management. It followed on from the conclusions of the national consultation on the health sector held in 2010 under the auspices of the Ministry of Agriculture on plant and animal protection.

The laboratory has a workforce of 81 people on 6 sites (Angers, Montpellier, Nancy, Rennes, Saint Pierre de La Réunion and Clermont-Ferrand). The headquarters of the LSV are in Angers, at the heart of a campus with global reach in plant sciences, dedicated to research, development and higher education.

The challenges of monitoring and controlling organisms harmful to plant health

Greater levels of international trade and globalisation have led to an increase in the risk of plant pests being spread from one region of the world to another. These risks must be anticipated in order to be better controlled. The Plant Health Laboratory supports government efforts to improve surveillance of risks to French territory with risk assessment studies and by developing methods to diagnose and identify these organisms.

Its different units and reference activities

The laboratory is divided into **six specialised stations** whose work is coordinated and organised by **two cross-cutting units**. Each specialised unit is a reference laboratory in one, two or even three disciplines.

The laboratories located at **Angers, Montpellier, Nancy, Rennes** and **Saint Pierre de La Réunion** cover respectively **bacteriology, virology** and **GMOs; entomology** and **invasive plants; mycology; nematology**; and **tropical pests and pathogens**. The **Clermont Ferrand** unit participates in these activities but is mainly involved in **quarantining** plants introduced under import regulation waivers.

The laboratory's missions are organised around two cross-functional activities, namely:

- **Technical and scientific expertise** on plant health risks and the coordination of phytosanitary risk analyses.

In preparation for risk management, the scientists of the Plant Health Laboratory maintain a science watch, issue alerts, carry out collective expert appraisals and organise the assessment of risks to plant health. By staying abreast of the state of research they are able to give the Ministry of Agriculture (as risk manager) advance warning of potential risks. The Ministry can then formally request ANSES to provide a more detailed risk assessment, needed to enlighten public policy decisions.

· Development of methods for identification of harmful organisms and for improving the reliability of official government analyses.

The LSV conducts assessments and develops methods for analysing pests. It is the National Reference Laboratory for the monitoring of dominant and emerging diseases and pests affecting crops and forests: pathogens and pests, most of which are regulated (fungi, bacteria, viruses, phytoplasm, nematodes, insects, mites), genetically modified organisms (GMOs) and invasive plants on cultivated land (Ministerial Order of 19 October 2011). It calls on a network of 19 certified laboratories responsible for first-line screening.

The Plant Health Laboratory also quarantines plants that are prohibited on European territory and are introduced for research or varietal selection purposes.

Setting up an Expert Committee (CES)

To carry out its mission of risk assessment, ANSES is assisted by Expert Committees (CESs). Consequently, after the Plant Health Laboratory joined ANSES, to ensure the high quality and independence of opinions issued by the Agency, a call for applications from experts was issued in 2011 for a committee to be set up in 2012. The role of this CES will be to assess the risks resulting, or likely to result, from organisms harmful to plant health. The harmful organisms in question will be those requiring a health assessment to enlighten public policy-making concerning plant protection policy.

Creation of the French plant health network (RFSV)

The Plant Health Laboratory contributes actively to the running of the French plant health network (RFSV) set up in 2011 at the request of the Directorate General for Food following the national consultation on the health sector. It brings together researchers and representatives of technical institutions, local analytical laboratories, professional and health bodies, industry, and a range of players in plant health and protection. The network's role is to extend knowledge in the field of plant health. To achieve this it forms partnerships with public and private bodies, primarily with a view to increasing our diagnostic capacity, without forgetting methods for controlling harmful organisms.



The stations of the Plant Health Laboratory

Close up on some of the key issues in plant health

Through its Plant Health Laboratory, ANSES fulfils such missions as maintaining a science watch, issuing alerts and carrying out or organising collective expert appraisals with a view to assessing risks to plant health from plant pathogens, pests, weeds and invasive plant species harmful to crops and forests. These assessments enable the government to make informed choices and take decisions on robust scientific bases.

Here are a few examples of the work carried out by the Plant Health Laboratory, particularly at its Angers station, illustrating some current or emerging issues in plant health.

Anticipating future threats: the example of the pine wood nematode

The pine wood nematode, or *Bursaphelenchus xylophilus*, is a microscopic worm that infests tree hosts, principally pines. The worm larvae are transported from conifer to conifer by beetles belonging to the genus *Monochamus spp.* If these insects develop in a tree infested with the nematode, they become carriers. European pines are highly susceptible to the pine wood nematode, especially Scots Pine (*Pinus sylvestris*), European Black Pine (*P. nigra*), Maritime Pine (*P. pinaster*) and Stone Pine (*P. pinea*).

Originally native to North America, the pine wood nematode was introduced into Japan at the beginning of the 20th Century, where it caused considerable damage. It then spread into southern China, Republic of Korea, and Taiwan and has now reached Europe: in Portugal since 1999 with limited outbreaks in Spain since 2008, where it is being eradicated.

If the parasite should reach France, the heavily-forested Landes area would be particularly at risk. In order to help the government predict the consequences of the introduction of this parasite, the Plant Health Laboratory participated in an assessment of the risks of accidental introduction of the pine wood nematode into the Landes area. This assessment is currently being finalised.

Furthermore, the Plant Health Laboratory has developed and is continuing to develop innovative methods for detecting the nematode in its host and its vector, to enhance territorial surveillance. For this purpose, it works closely with its Portuguese counterparts.

Preventing the progression of a pest: the case of Western corn rootworm

Western corn (maize) rootworm, or *Diabrotica virgifera*, is a beetle originating from Central America. Between 1955 and 1970, the insect progressively invaded North America, where it became the principal threat to maize production, costing the sector an estimated billion dollars a year. The damage is mainly caused by the larval stages and especially by older larvae, which attack the plant's prop roots and consume their cortical parenchyma. This leads to nutritional deficiency, weakening the plants and causing them to lodge⁵.

Western corn rootworm was first detected in Europe in 1992, near Belgrade airport, and then spread to a large part of central and south-eastern Europe. Several secondary outbreaks have

⁵ In arable farming, lodging is an accident affecting certain crops (mainly cereals including maize, but also pulses) leaving them lying on the ground and often causing a considerable drop in yield or even the loss of the crop. It may be due to bad weather but can also be caused by parasites or physiological accidents, related, for example, to imbalanced fertilisation (excessive nitrogen) leading to exaggerated growth of the stalks.

since been detected in regions unconnected to the initial outbreak. This insect is covered by Council Directive 2000/29/EC and control is mandatory.

To combat the progression of this pest in Europe, in 1999 France set up an annual surveillance network, which detected it in the Ile-de-France region in 2002. Since then, the network has been reinforced and places traps each year in maize crops and near the insect's possible entry-points, especially airports and motorways.

In France, the current policy for controlling Western corn rootworm is in line with the goal of reducing pesticide use, resorting to plant protection products only when necessary (in accordance with the Ecophyto plan). The strategy for combating Western corn rootworm is therefore based on a dual approach combining crop rotation with the in-furrow application of insecticides at sowing (1/20th of the surface area of the field); above-ground parts of the crop are only treated in high-infestation situations.

The control strategy pursues different objectives depending on the level of infestation: eradication in areas of low infestation and containment in more heavily-infested areas. The ultimate aim is to sharply reduce the extension of *Diabrotica virgifera* with the aim of keeping the insect under long-term control.

The Plant Health Laboratory participates in the effort to control this pest in several ways. In 2002, it was first to confirm the presence of the insect on French soil. It makes a considerable contribution to following up the work of the trapping networks, confirming the identification of captured insects in newly-affected areas. It developed the official method for recognising the insect and produces many Opinions on control processes. Lastly, it is working on ways of using the case of Western corn rootworm as a model for methodological studies in plant health risk assessment.

Detection of unauthorised GM organisms: scientific and technical watch

Around the world, more than 40 plant species have undergone genetic modifications to improve their resistance to disease, their nutritional or organoleptic properties, etc. As a result, therefore, new GM crops are authorised each year for cultivation, as human food and/or animal feed. As different authorisation procedures are used in different countries and continents, GM crops authorised in one country are not necessarily authorised in another. In order to be able to verify that no unauthorised GM foods are present in a particular country, it is therefore necessary to maintain a close watch on the GM organisms described around the world and to ensure that there are *ad hoc* analytical tools available for detecting and/or identifying them.

In France, no genetically modified plants are currently authorised for cultivation. In order to verify that this position is properly respected in France, surveillance plans for at-risk sectors are implemented at import points and in the field (especially concerning maize).

Since 2009, the Plant Health Laboratory's Angers site has taken over this activity, previously performed by the Orleans site, of screening for GMOs among certain plant species intended for cultivation and in the field (at import points and in territorial surveillance). The current scope of its work covers species of maize (crops), potato, sugar beet and wheat, which are very important production sectors in France, but also includes rice and cotton. For all these species, in a context of rapid technological development, the challenge for the laboratory is to remain fully aware of the new GMOs developed and authorised across the world while at the same time ensuring that the analytical tools for detecting and identifying them are available. It coordinates these activities with its key partners: the laboratory services shared by the Strasbourg Institute for Parasitology and Tropical Diseases and the Study Group for the Control of Varieties and Seeds (GEVES).

A work of art financed by the Laboratory from the mandatory 1% of public procurement costs

As contracting authority for the extension of its buildings at its Angers station, the Plant Health Laboratory, as a public establishment, set aside 1% of the building costs to commission a work of art, as required under French law. A competition was held and 130 submissions were assessed by a jury that included members of the Regional Department for Cultural Affairs (DRAC), the Departmental Territorial Directorate (DDT), the architectural office acting as prime contractor for the project and the Laboratory. Three artists were short-listed to present an original work and the final winner was Jacques Vieille, an artist based in the south of France. His plan is to create a secret, mineral garden in the laboratory's patio, with red and grey as the dominant colours.



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A model of the work to be housed at the Plant Health Laboratory

The artist

Jacques Vieille is part architect, part landscape gardener, part decorator, and part horticulturalist. With all these strings to his bow, his sculptures have long been described as being simultaneously scientific, ironic and poetic, somewhere between nature and culture, art and artifice, the organic and the mechanical. A subtle edifice with numerous ramifications playing with mimicry, cross-overs and the opposition between these various aspects, with the column as the basic unit.

His most recent work, which combines the height of artificiality, soilless hydroponics with the most sophisticated materials and tools used in industrial construction and the food industry, illustrates his constantly questioning, critical and amused approach to our everyday surroundings.

Jacques Vieille has participated in a number of exhibitions in France and abroad:

Sydney Biennale, 1982.

Centre George Pompidou, 1984.

Documenta 8, 1987.

Musée d'art modern, Paris, 1989.

Le Consortium, Nouveau Musée, 1989.

Kunsthalle, Bern, 1999.

Toyota Museum, 2006.

The Louvre, Paris, 2007

He has also completed some major public commissions:

Place Notre Dame des Marais, Villefranche sur Saône, 1981.

Gooise Knoop, Amsterdam, 1995.

Station Square, Haarlem, 1998.

Argoulet Metro Station, Toulouse, 2000.

Pont Michel Tramway Station, Nice, 2007.