

RESEARCH IN AGROBIOSCIENCE

The term «agrobioscience» covers sciences and techniques used in agriculture-related fields—among them plant and animal production, the food industry, land and forest planning, environmental protection, natural resource management, and health.



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An age-old activity, agriculture is today at the heart of a series of changes linked to key societal challenges, including sustainably managing renewable natural resources, food security, nutrition, and health security and equity, establishing new systems for ensuring animal and human health, and finding sustainable alternatives to fossil carbon use.

At the global level, agriculture must also respond to a triple challenge with respect to food, energy, and the environment.

In addition to growing scarcity in natural resources, including soil, water, and biodiversity, world agriculture must confront the effects of climate

change, especially higher temperatures, more variable rainfall, and more frequent extreme climatic conditions, such as flooding and drought.

In such a context, research activities are opening out into new areas of study and technological breakthroughs, including robotics and precision techniques for agriculture, ecotechnology, biotechnology and bioinformatics, big data, water management technologies, etc.

The goal is to develop agriculture with high economic and social value while preserving resources and enhancing the environment.

To respond to these challenges, France has launched the Agriculture

Innovation Program 2025, featuring four key themes:

- > Strengthening research on agricultural soil, agriculture, and climate;
- > Positioning agriculture at the heart of the French research strategy;
- > Connecting digital technology and agriculture; and
- > Promoting innovation by linking farmers, business, and actors in research and education within local ecosystems.

To face these challenges, France already has significant longstanding research mechanisms for agriculture, veterinary medicine, and forestry. Globally, it ranks third in terms of the number of publications on agriculture.

Agricultural research in temperate environments is principally the sphere of the French National Institute for Agricultural Research (INRA). In addition, other institutions and bodies are also making significant contributions, including the National Institute for Scientific and Technological Research for the Environment and Agriculture (IRST-EA), the Center for International Cooperation on Agricultural Research for Development (CIRAD), the Research Institute for Development (IRD), which focuses on agronomic research in tropical and Mediterranean environments, the National Agency for Health, Food, Environment, and Work Security (ANSES), and various higher education and agronomic research institutions.

“At the global level, agriculture must also respond to a triple challenge”



KEY RESEARCH ACTORS

■ Agreenium, l'Institut agronomique, vétérinaire et forestier de France (French Institute of Agronomy, Veterinary Medicine, and Forestry) - <https://agreenium.fr>

Agreenium brings together four research bodies (INRA, CIRAD, IRSTEA, ANSES) and 15 higher education and research institutions that provide training in engineering, veterinary medicine, and landscape design and offer Masters and PhD programs.

Agreenium's member organizations bring together 6,800 researchers, teaching researchers, and research engineers in nearly 300 research units, most commonly in joint research clusters (JRCs) within the National Center for Scientific Research (CNRS), which has 2,500 doctoral students.

■ Allenvi, Alliance nationale de recherche pour l'environnement (National Environmental Research Alliance) - www.allenvi.fr

ALLENVI manages public research in order to plan and coordinate the French environmental scientific strategy on various topics, including agroecology and soils, food and the food industry, animal life, biodiversity, climate, water, ecotechnologies, environmental assessment, the seas, plants, risks, land use, towns and cities, and mobility. ALLENVI labels research infrastructures, long-term observation, and testing systems for environmental research and Biology, Health, and Agronomy Infrastructures (IBISA) platforms.

■ Anses - Agence nationale de sécurité sanitaire de l'alimentation et du travail (Food, Environmental and Occupational Health & Safety Agency) - www.anses.fr

A scientific body, ANSES has 11 reference and research laboratories focusing on food, animal, and plant health. With its teams of specialists, it assesses risk in its fields of expertise and issues marketing authorizations for veterinary medicine, phytopharmaceutical products, biocides, etc.

■ Cirad - Centre de coopération internationale en recherche agronomique pour le développement (Cluster for International Cooperation on Agricultural Research for Development) - www.cirad.fr

CIRAD is a French organization dedicated to agricultural research and international cooperation for sustainable development in tropical and Mediterranean zones. It places its scientific and institutional expertise at the service of public policy-makers in countries of the South and initiates international debate on agricultural challenges. CIRAD structures its research around six major areas:

- Public action for development: Strengthening public action to reduce structural inequalities and poverty;
- Intensive ecological agriculture: Creating agriculture that promotes agroecosystems sustainably;
- Sustainable food industry: Ensuring food security in societies of the South;
- Plant and animal health: Understanding, anticipating, and managing risks linked to animal and plant bioaggressors;
- Societies, natural environments, and the land: Supporting societies toward sustainable land management;
- Promotion of biomass: Innovating for the sustainable use of biomass for non-food purposes.

■ Inra - Institut national de la recherche agronomique (National Institute for Agricultural Research) - www.inra.fr

The leading agricultural research institute in Europe and second in agricultural sciences worldwide, INRA conducts research in



the major challenges facing society over food, agriculture, and the environment, viewed today within the broader framework of bioeconomics and food systems.

The institute brings together over 1,800 researchers, 2,600 engineers and assistant engineers, and 3,500 full-time technicians and administrators in its laboratories. Every year, it hosts close to 2,500 interns and over 500 paid doctoral students.

The institute is organized into 13 departments supervising and managing the scientific work of 184 research units and 45 testing units spread out over 17 centers all over France, the French West Indies, and French Guiana. Since 2010, INRA has funded the following eight major transdisciplinary research programs: Adapting agriculture and forests to climate change; Food practices and behaviors; Transitions for global food security; Management of agroecosystemic services; Integrated management of plant health; Integrated management of animal health; Metaomics and microbial ecosystems; and Genomic selection.

<http://metaprogrammes.inra.fr>

■ Carnot Institutes Network www.instituts-carnot.eu

The network of 38 Carnot Institutes is dedicated to research aimed at industry. Several institutes conduct research in agrobiosciences: Bioenergy, Biomolecules, and Biomaterials from Renewable Carbon (3BCAR), AgriFood Transition, Livestock Industry for the Future, Sustainable Engineering of Georesources (ISIFoR), Innovations for Enhancing the Sustainable Competitiveness of Crop Production (Plant2Pro), and Sensory and Nutritional Quality of Foods as Part of a Sustainable Food Availability (Qualiment).

■ Ifremer – Institut national de recherche intégrée en sciences marines (French Institute for Integrated Research in Marine Sciences) - www.ifremer.fr

IFREMER contributes to the monitoring of the marine environment at all levels and to the understanding of ecosystems, processes governing these, and the services they offer in a context of global change. It designs and implements research and monitoring infrastructures for the marine environment. It also operates a significant amount of the French oceanographic fleet for the benefit of the scientific community.

EXCELLENCE IN RESEARCH INFRASTRUCTURES AND LABORATORIES

> **#DigitAg** **Institut Convergences** **Agriculture Numérique**

(Digital Agriculture Convergence Laboratory)

Composed of 17 members (4 research bodies, 3 higher education institutions, 2 innovation-transfer organizations, and 8 companies), #DigitAg focuses on six research avenues, including the impact of Information and Communication Technology (ICT) on the rural sector, innovation and digital agriculture, and modeling and simulation.

www.hdigitag.fr

> **IBISA** **Infrastructures en Biologie** **Santé et Agronomie** (Infrastructures in Biology, Health, and Agronomy)

Members of the French Scientific Interest Group IBISA consist of INSERM, CNRS, INRA, CEA, INRIA, the National Cancer Institute (INCa), and the Conference of University Presidents (CPU). IBISA's mission is to promote the activities of thematic networks on platform-developed technologies.

www.ibisa.net

> **Labex Agro** **Agronomie et** **Développement Durable**

(Agronomy and Sustainable Development)

Labex Agro focuses on agriculturally important plants. It brings together about 40 research units and over 1,200 scientists, creating a continuum of multidisciplinary skills (biological sciences, engineering sciences, human and social sciences) from the study of genes to the end-point use of plants and benefiting from recognized expertise in a very large number of temperate, Mediterranean, and tropical species.

<http://www.agropolis-fondation.fr/fr/comunaute-scientifique-de-montpellier/un-reseau-scientifique-de-premier-rang-mondial/labex-agro.html>

> **Labex ARBRES** **Recherches Avancées** **sur la Biologie de l'Arbre et** **les Ecosystèmes Forestiers**

(Advanced Research on the Biology of Tree and Forest Ecosystems)

Supported by the University of Lorraine, INRA, AgroParisTech, the National Forestry Office (ONF), the National Center for Forest Resources (CNPFR), the Regional Center for Innovation and Technology Transfer for Wood (CRITT BOIS), and the European Forest Institute (EFI), LabEx works to expand knowledge of the mechanisms that govern the evolution of forest ecosystems so as to prevent negative global changes and to devise appropriate management practices. One of its unifying themes is the application of agroecological concepts and methods to increase the viability of adapting agroecosystems and all agricultural land as well as the capacity to do so.

<http://mycor.nancy.inra.fr/ARBRE/>

> **Labex BASC** **Biodiversité, agroécosystèmes,** **société, climat** (Biodiversity, Agroecosystems, Society, and Climate)

Labex BASC brings together 13 laboratories in a multidisciplinary research project aimed at understanding and predicting socioecosystem dynamics in a context of global change, in particular climate change. One of its unifying themes is the application of agroecological concepts and methods to increase the viability of adapting agroecosystems and all agricultural land as well as the capacity to do so.

<https://www6.inra.fr/basc>

> **Labex COTE** **Évolution, adaptation et** **gouvernance des écosystèmes** **continentaux et côtiers**

(Continental to Coastal Ecosystems: Evolution, Adaptability, and Governance)

Labex COTE brings together 9 laboratories at the University of Bordeaux and key national research institutes involved in research in terrestrial and aquatic ecosystems (INRA, CNRS, IRSTEA, and

IFREMER) and 200 researchers in biology, physics, chemistry, and socioeconomic sciences. The goal of Labex COTE is to understand and predict the responses of ecosystems to human-induced change and provide tools and methods for regulating and managing their development.

<http://cote.labex.u-bordeaux.fr>

> **Labex Europe Embrapa (Brazil)**

CIRAD, INRA, and IRD have appointed Agropolis, Montpellier and the regional consortium of 28 research and higher education institutions to manage this Labex Europe, inaugurated in 2002, and exported to other countries (South Korea, China). The three research topics of the Labex Europe program take account of the scientific priorities common to Brazil and France, including the development of advanced plant biology, agrofood technologies, and the management of natural resources.

www.agropolis.fr/gestion-projets/labex-europe-laboratoire-exterieur-embrapa-bresil.php

> **Labex Tulip** **Écologie et biologie végétale** (Ecology and Plant Biology)

The interdisciplinary approach to biology and ecology focuses on interactions between organizations and communities in natural and human-modified environments with the goal of developing new applications in ecotechnology and preservation biology.

www.labex-tulip.fr

> **Labex SPS** **Sciences des Plantes de Saclay** (Saclay Plant Sciences)

SPS Labex brings together about 50 research teams specializing in plant sciences from four institutions in the Paris area and a staff of 700. Its research activities deal with understanding the genetic, molecular, and cellular instruments controlling plant development and physiology and their interactions with the biotic and abiotic environment.

<https://www6.inra.fr/saclay-plant-sciences>

■ **IRD – Institut de recherche pour le développement** (Research Institute for Development) - www.ird.fr

IRD is based on an equitable scientific partnership with mainly intertropical and Mediterranean developing countries. It is involved in the management of environmental, health, and geostrategic crises, crisis prevention, preparation mechanisms for mitigating the consequences of climate change, sustainably manage resources, and reducing inequalities. It also operates on the emerging diseases front. Its agricultural research is targets strengthening food security, fighting malnutrition, and preserving biodiversity. IRD is a partner in the 4-per-1000 Initiative scientific program launched by the Consultative Group for International Agricultural Research (CGIAR), whose goal is to reduce greenhouse gas emissions and improve the carbon storage of cultivated land. www.4p1000.org

■ **Irstea – Institut national de recherche en sciences et technologies pour l'environnement et l'agriculture** (National Research Institute of Science and Technology for Environment and Agriculture) - www.irstea.fr

IRSTEA conducts environmental research to respond to three major challenges faced by society: the sustainable management of water and land, the prevention and anticipation of natural risks, and environmental quality. It develops research programs focused on action and support for public policies involving a strong partnership with universities, research bodies, economic actors, and public policy makers. Bearing the Carnot label, IRSTEA is involved in about 10 competitiveness clusters and currently manages 350 research contracts with manufacturers and small and mid-sized enterprises (SME). IRSTEA focuses on 12 research fields, among which are the following: Water-related hazards and risks; Territorial development and multifunctional agriculture; Technological innovations for sustainable agriculture and the environment; Terrestrial ecological systems: dynamics, vulnerabilities, and engineering; and Spatial information systems for integrated environmental management.

www.irstea.fr/la-recherche/themes-de-recherche/

COMPETITIVENESS CLUSTERS

■ Agri Sud-Ouest innovation - www.agrisoi.fr

This cluster develops collaborative projects around three key axes: development of agrofines and promotion of all elements of agricultural production; improvement in the efficiency of production systems from field to factory in order to increase competitiveness; and optimization of production inputs for cleaner and more productive agriculture.

■ Aquimer: Cluster for Aquatic Products - www.poleaquimer.com

The cluster aims to maximize available resources and create new resources in the context of sustainable development and in the face of increased demand for aquatic products, the need for fish catches, and the development of aquaculture. Aquatic products must be positioned in the food of the future and the fundamentals of the aquatic industry must be modified so that new professional and technological approaches can emerge.

■ Céréales Vallée - www.cereales-vallee.org

This cluster is directed at the cereal sector from seed to finished product to optimize and increase cereal production, facilitate the processing of cereals into quality animal products, respond to food needs by allying nutrition and usage quality, and promote renewable resources, namely cereal agromaterials.

■ Industries & Agro-Ressources - www.iar-pole.com

Operating at the heart of plant biochemistry and industrial technologies, this cluster is devoted to bioeconomics for advanced biofuels, agromaterials, biomolecules, and ingredients.

■ Nutrition Santé Longévité - www.pole-nsl.org

This cluster constitutes a point of convergence between health and agriculture and interconnects its strategic axes between the diseases of modern society (cardiovascular, metabolic, neurodegenerative, inflammatory) and food.

■ Qualitropic - www.qualitropic.fr

This cluster of tropical bioeconomics is located in Réunion Island (Indian Ocean) and supports the development of key technologies: biorefinery, biotechnologies (plant, marine, industrial, health, environment), biomass combustion, depollution, ecoextraction, ecological intensification, methanization, photobioreactors, and protein substitution.

■ Terralia - www.pole-terralia.com

This cluster specializes in the plant sector (fruit, vegetables, olive, vines and wine, spices and aromatic plants, etc.). It focuses its actions on sustainable, innovative, and digital agriculture; conservation, processing, and extraction processes (ecoextraction technologies, ecopackaging creation, recycling of organic waste); improvement in the taste, health, and nutritional quality of products (nutritional properties, food security); distribution; and tomorrow's foods.

■ Valorial - www.pole-valorial.fr

This cluster focuses on agrofood competitiveness and covers nutritional health, ingredients, food quality and security, processes, meat products, fruit and vegetables, egg products, milk and its by-products, and packaging.

■ Vegepolis - www.vegepolys.eu

The cluster is the reference point for the production through breeding and farming practices of special plant products that are respectful of the environment and human health. Its goals are plant breeding, marker-assisted selection and breeding, phytoprotection, phytoanalytics, and phytochemistry.

■ Vitagoras - www.vitagora.com

This cluster focuses on the theme of Taste, Nutrition, and Health and concentrates on food products and food preparation and cooking equipment, food supplements for optimizing consumer well-being. Vitagora promotes three strategic axes: preservation of the environment, preservation of health capital, and the development of taste enjoyment.

■ Xylofutur - <http://xylofutur.fr>

This cluster is dedicated to products and materials from cultivated forests.

USEFUL LINKS

- **ABioDoc**, National Center for Organic Farming Resources: www.abiodoc.com
- **AFD**, French Development Agency: www.afd.fr
- **Agreenium**, French Institute of Agronomy, Veterinary Medicine, and Forestry: <http://agreenium.fr>
- **Agreste**, Statistics, Evaluation, and Agricultural Forecasting: <http://agreste.agriculture.gouv.fr>
- **Agricultural Show**: www.salon-agriculture.com
- **Agrocampus Ouest**, Higher Institute for Agronomic, Agrofood, Horticultural, and Land-Management Sciences: www.agrocampus-ouest.fr
- **Agroecology (MOOC) – Agreenium-IAVFF**: <https://www.france-universite-numerique-mooc.fr>
- **AgroParisTech**, Institute for Science and Industry for the Living and the Environment: www.agroparistech.fr
- **Agropolis**: www.agropolis.fr
- **AgroSup Dijon**, National Higher Institute for Agricultural, Food, and Environmental Sciences: www.agrosupdijon.fr
- **AllEnvi**, Food, Climate, Water, and Land: www.allenvi.fr
- **ANSES**, French Agency for Food, Environment, and Occupational Health & Safety: www.anses.fr
- **Bordeaux Sciences Agro**, National Higher Institute for Agricultural Sciences: www.agro-bordeaux.fr
- **CIRAD**, Agricultural Research for Development: www.cirad.fr
- **ECOFOR**, Forest Ecosystems: www.gip-ecofor.org
- **EDUCAGRI**, Training for Jobs in Agriculture, Forestry, Nature, and Land Management: www.educagri.fr
- **ENFA Toulouse**, Higher Institution for Training, Research, and Support for Agricultural Education: www.enfa.fr
- **ENGES**, National Institute for Water Engineering and the Environment: <https://enges.unistra.fr>
- **ENSAIA**, National Higher Institute for Agriculture and the Food Industries: <http://ensaia.univ-lorraine.fr>
- **ENSAT**, National Higher Institute for Agriculture: www.ensat.fr
- **ENSFEA**, National Higher Institute for Training and Agricultural Education: www.ensfea.fr
- **ENSP**, National Institute for Landscape Architecture: <https://www.ecole-paysage.fr>
- **ENSTIB**, National Higher Institute for Wood Technology and Industries: www.enstib.univ-lorraine.fr
- **ENVA**, National Veterinary Institute, Alfort: www.vet-alfort.fr
- **ENVIT**, National Veterinary Institute, Toulouse: www.envit.fr
- **ESA**, Higher Agricultural Institute, Angers-Loire: www.groupe-esa.com
- **ESA**, European Society for Agronomy: www.esagr.org/structure
- **ESB Nantes**: www.ecoledubois.fr
- **Fésia**, Network for Education and Research in Life Sciences: www.fesia.org
- **IDELE**, Livestock Farming Institute: <http://idele.fr>
- **IFREMER**, French Institute for Integrated Research in Marine Sciences: www.ifremer.fr
- **INRA**, National Institute for Agricultural Research: www.inra.fr
- **IRSTEA**, Research Institute for Environmental and Agricultural Science and Technology: www.irstea.fr
- **ISA**, Higher Institute for Agriculture, Life Sciences (Agriculture, Food Science, Biology, or related field), Lille: www.isa-lille.fr
- **ISARA**, Higher Institute for Agronomy, Food, and Environment, Lyon: www.isara.fr
- **ITAB**, Technical Institute for Organic Farming: www.itab.asso.fr
- **MAAF**, Ministry of Agriculture, Agrofood, and Forests: <http://agriculture.gouv.fr>
- **Montpellier SupAgro**: www.supagro.fr
- **ONIRIS**, National Institute for Veterinary Medicine, Agrofoods, and Food Science, Nantes-Atlantique: www.oniris-nantes.fr
- **PURPAN**, Engineering School: www.purpan.fr
- **UnilSalle**: www.esitpa.org
- **VetAgro Sup**, Higher Education and Research Institute on Food, Animal Health, Agricultural, and Environmental Sciences: www.vetagro-sup.fr

AGROECOLOGY – FROM ORGANIC FARMING TO SUSTAINABLE DEVELOPMENT

An agroecological approach aims to provide French agriculture with an ambitious perspective by encouraging new, high-performing production systems in three economic, environmental, and social areas:

- > Producing in a novel manner by optimizing the use of natural resources and processes;
- > Preserving the resources on which agricultural production and people depend; and
- > Responding to society's demand for moving agriculture toward new growth models.

RESEARCH PROJECTS AND INTERNATIONAL RESEARCH NETWORKS



Polytechnique@J.Barande

Arcad

www.arcad-project.org

Intended to establish a new, open, and multifunction platform (conservation, research, and training) and dedicated to the evaluation and improved use of biodiversity in plants grown in tropical and Mediterranean areas, ARCAD operates in partnership with INRA, CIRAD, Montpellier SupAgro, and IRD.

CORE ORGANIC: Coordination of European Transnational Research in Organic Food and Farming Systems

www.coreorganic.org

Working for European research, this European Research Area (ERA)-Net cofund aims to increase cooperation between national research activities. Core Organic's overall goal is to promote the quality, relevance, and use of resources in European research in organic food and agriculture and create a community able to finance transnational research on organic farming.

ORG-COWS: Toward Preventive Health Management in Native Dual-purpose Cattle Adapted to Organic, Pasture-based Production Systems via Novel Breeding Strategies Based on Novel Trait Recording.

<http://projects.au.dk/coreorganicplus/research-projects/2-org-cows/>

The goal of this cluster is to adapt dual-purpose breeds to low-input, pasture-based systems and organic farming. Three French partners are involved: IDELE (Livestock Farming Institute), ITAB (Organic Farming Technical Institute), and INRA.



LEADING RESEARCHERS IN THE FIELD OF AGRICULTURE

■ OLIVIER DE SERRES

(1539-1619) set up a model farm on his Pradel estate using innovative methods, including crop rotation, sulfuration of vineyards, and spreading new crops (corn, hop, beet, rice, madder-root). At King Henry IV's request, he planted 20,000 mulberry bushes in the Tuileries Gardens, which helped spread the breeding of silk worms. His book, *Théâtre d'Agriculture et Mesnage des Champs*, published in 1600, was the first treatise on agronomy. In this book, he developed the idea that working the soil is inseparable from consideration of the use humans make of it.

■ JEAN-BAPTISTE BOUSSINGAULT (1801-1887) is considered the founder of modern agricultural chemistry thanks to his discoveries in the workings of nitrogen, fat metabolism, plant composition in the food of herbivores, etc. The author of 350 works, he collected his work on agricultural chemistry under the title of *Agronomie, Chimie Agricole, et Physiologie*, with eight volumes published between 1860 and 1891 and soon translated into English as well as German.

■ ADRIEN DE GASPARIN (1783-1862) conducted a number of studies in agronomy. He published books entitled *Le Croisement des Races* and *Manuel d'Art Vétérinaire*, a paper entitled *Les Maladies Contagieuses des Bêtes à Laine*, and a *Guide des Propriétaires de Biens Ruraux Affermés*.

■ RENÉ DUMONT (1904-2001) was an expert on agricultural issues in developing countries and a supporter of international cooperation. He examined current agricultural techniques and identified those that could be usefully disseminated in France.

■ STÉPHANE HÉNIN (1910-2003) was the author of studies on soil physics. His work *Profil Cultural* is a method for observing soil made easily accessible to farmers. Combining basic and applied research, he was a precursor of the impact of agricultural activities on the environment, in particular on ground-water tables.

■ MICHEL SEBILLOTTE (1934-2010) developed a number of concepts for examining how plant communities operate at plot level by making yield development pivotal in the analysis. He proposed a new definition of agronomy as "The study carried out simultaneously in time and space of the relationships occurring within an entity composed of the plant community and the physical, chemical, and biological environment and on which humans act to obtain a yield."

FRENCH RESEARCH PORTAL

WWW.CAMPUSFRANCE.ORG/EN/RESEARCHER

A UNIQUE, **ONLINE-ACCESS INFORMATION POINT**
FOR LOCATING RESEARCH PROJECTS



◆ UNDERSTANDING FRENCH RESEARCH

- > Understanding how PhDs operate in France;
- > Knowing how to start and finance a PhD;
- > Applying to international research programs (Hubert Curien Partnerships, *Make Our Planet Great Again*).



◆ DIRECTORY OF DOCTORAL INSTITUTIONS

Point of entry for starting a PhD and the 270 doctoral institutes organizing and supervising doctoral training.

- > Search by key words, regions, and disciplines;
- > Comprehensive information on doctoral institutions: Research areas, criteria and points of contacts for admission, welcome mechanisms, proposed topics, current financing, international dimension, and points of contacts for associated research laboratories;
- > Access to fields offered by each doctoral institutions.

13 doctoral institutions in agronomy and ecology, accessible at:

<https://doctorat.campusfrance.org/en/phd/dschools/main>

◆ PhD TOPICS, LABORATORY INTERNSHIPS, AND POST-DOCTORAL STUDIES:

- > Offers financed through doctoral contracts, Industrial agreements for training through research (CIFRE), and specific offers devoted to programs financed by foreign governments;
- > Offers for internships for experience in laboratory research;
- > Post-doctoral offers for work in French laboratories;
- > A detailed financing mechanism for each research offer (PhD topics, post-docs, and internships);

Almost 200 offers made public in agronomy and ecology each year, accessible at: <https://doctorat.campusfrance.org/phd/offers> > Agronomy-Ecology > Domains and Disciplines.