



French International Agricultural Research System

M. Dukhan © IRD

A research system actively focused on global issues

The French agricultural research and training system is designed to deal with key agricultural, environmental, food, health (plants and animals) and nutritional issues facing industrialized and developing countries. A substantial part of this system is geared towards research, innovation and training for developing countries. Involved are:

- almost 14,000 agents, including 6,700 scientists (6,000 researchers and engineers, 700 teacher researchers);
- some 5,000 students and 2,700 PhD students working in agriculture and veterinary science fields.

The system is organized in scientific clusters and technology platforms located throughout France, and in the French overseas departments and territories, in association with other research and higher training stakeholders (research organizations, universities and top-ranking higher education establishments). It is also based in many different countries worldwide, especially in developing countries.

Montpellier—with 2,300 scientists from more than 25 research institutions and universities pooled within Agropolis International—converges substantial agricultural research and training resources and expertise, a major share of which is devoted specifically to agricultural research for development (ARD). In 2011, the headquarters of the Consultative Group on International Agricultural Research (CGIAR) were set up in Montpellier, thus further strengthening this orientation.

The agricultural research field in France benefits from:

- a diverse range of many long-term public and private partnerships worldwide;
- a major global presence, with more than 400 researchers posted in research organizations and universities in over 50 emerging or developing countries;
- a hosting capacity for students, mainly at MSc and PhD levels (over 2,700), and researchers (post-docs and senior scientists) from partner countries. This often involves co-supervision and co-awarding of degrees with partner institutions, with rotational stays. These training courses are usually managed under bilateral partnership agreements and often benefit from governmental or European funding.

A coordinated system

The main institutions of the French research platform are **CIRAD**, **INRA**, **IRD** and **IRSTEA**. In 2009, the **Agreenium** consortium was founded, pooling two agricultural research organizations (**INRA** and **CIRAD**) and four agricultural university-based establishments (*AgroParisTech*, *Agrocampus Ouest*, *Montpellier SupAgro* and the *National Veterinary School of Toulouse*). This new consortium coordinates research and training initiatives in the fields of agriculture, food production, animal health and the environment, while promoting them globally in close collaboration with other French stakeholders in these fields.

The French **Commission for International Agricultural Research (CRAI)** was set up to delineate and coordinate French international agricultural research initiatives. It consists of representatives of three French ministries (**Higher Education and Research**, **Foreign and European Affairs**, and **Agriculture, Food, Fisheries, Rural Affairs and Land Use Planning**), four key research institutions (**CIRAD**, **INRA**, **IRD** and **IRSTEA**), **Agreenium** and the **Agropolis International** scientific cluster. CRAI represents France in some specialized international institutions (CGIAR, EIARD, etc.). It contributes to designing the French agricultural development-oriented research strategy based on a 'for, in collaboration with, and within developing countries' approach.

The research and higher education organizations are subsidized primarily by the French **Ministry of Higher Education and Research**, as well as the **Ministry of Agriculture, Food, Fisheries, Rural Affairs and Land Use Planning**, and the **Ministry of Foreign and European Affairs**. Several agencies such as the **National Research Agency (ANR)**, the **Inter-establishment Agency for Research for Development (AIRD)** and **Agropolis Fondation** fund research initiatives on the basis of calls for projects, some of which foster partnerships with teams in developing countries. These French contributions complement the contractual resources of European and international agencies and foundations. The French **Ministry of Foreign and European Affairs** also provides specific support for scientific cooperation programmes worldwide. The **French Development Agency (AFD)** provides specific funding for French Cooperation agricultural development projects, sometimes including research activities. ●●●



••• This French research system is part of the European Research Area, with close ties and mechanisms for the coordination of policies (Standing Committee on Agricultural Research—SCAR, and the European Initiative for Agricultural Research for Development—EIARD), programmes (ERA-NETs, Joint Programming Initiatives—JPI, and Knowledge and Innovation Communities—KIC), operators (AGRINATURA) and research teams.

Internationally, French research organizations are actively involved in large-scale coordination or research programming initiatives such as the Global Research Alliance (GRA), the International Research Initiative for Wheat Improvement (IRIWI), CGIAR Research Programmes (CRPs), etc.

Promoting high impact research excellence geared especially towards innovation and development

From a scientific standpoint, French agricultural research is one of the top systems in the world in terms of the number of references to publications.

CRAI considers that discipline- and academic-based approaches targeting excellence, as well as linear innovation transfers in the fields of agriculture, food production, human nutrition and environment should be supplemented by an integrative participatory approach that could play a strategic role in development processes:

- integration of different spatiotemporal scales at which agricultural production processes and natural resource use take place;
- integration of biophysical, economic and social disciplines in order to account for the complexity of many research topics concerning, for instance, food and nutrition, land tenure, GMOs and ecological engineering;
- participation of all stakeholders to gain insight into and deal with market mechanisms, conflicts concerning resource-use management and various approaches to initiatives, or to ensure the interaction of conventional knowledge and scientific expertise to produce innovations.



Tools to benefit the global agricultural research system

The French agricultural research system is involved in or has initiated many observatories and networks for shared agricultural, genetic, food and environmental resources. In recent years, France has developed monitoring and complementary survey tools that will benefit the global agricultural research system, especially to ensure food security:

- **Agrimonde:** foresight studies on agricultural production and food and nonfood consumption using qualitative data and a quantitative model with a 2050 scope. The aim is to pinpoint priorities for relevant productive research.

www.inra.fr/L_institut/prospective/agrimonde

- **World Agriculture Watch:** a network for the collection of reliable data on production systems and their structures, and for exchanges and discussions involving scientists and representatives of the farming community (under construction). Its secretariat is hosted by FAO. ■

WEBSITES OF THE MAIN FRENCH RESEARCH STAKEHOLDERS

■ Consortium national pour l'agriculture, l'alimentation, la santé animale et l'environnement (Agreenium): www.agreenium.org

■ Agropolis International: www.agropolis.org

■ Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD): www.cirad.fr

■ Institut National de la Recherche Agronomique (INRA): www.inra.fr

■ Institut de Recherche pour le Développement (IRD): www.ird.fr

■ Institut de recherche en sciences et technologies pour l'environnement et l'agriculture (IRSTEA, former Cemagref): www.irstea.fr

■ Agropolis Fondation: www.agropolis-fondation.fr

■ Agence inter-établissements de recherche pour le développement (AIRD): www.aird.fr

■ Agence Nationale de la Recherche (ANR): www.agence-nationale-recherche.fr

■ Agence Française de Développement (AFD): www.afd.fr

■ French Ministry of Foreign and European Affairs: www.diplomatie.gouv.fr

■ French Ministry of Agriculture, Food, Fisheries, Rural Affairs and Land Use Planning <http://agriculture.gouv.fr>

■ French Ministry of Higher Education and Research: www.enseignementsup-recherche.gouv.fr

CRAI Commission on International Agricultural Research

<http://www.agropolis.org/cooperation/crai-international-agricultural-research-commission.php>