

ARVALIS

Agricultural Technical Institute

Agronomic expertise to help producers and related sectors
achieve efficient and sustainable agriculture



WHEAT, BARLEY, TRITICALE, RYE, OATS, MAIZE,
SORGHUM, FODDER, POTATOES,
FIBER FLAX, TOBACCO

 **ARVALIS**

← Phénofield, a platform dedicated to studying the drought tolerance of crops using eight mobile greenhouses (Ouzouer-le-Marché, 41)

ARVALIS is the largest applied agricultural research Institute in France and the leading field arable crop specialist.

Its mission is to gather knowledge and introduce innovations that will benefit straw cereal growers (bread wheat, durum wheat, barley, triticale, rye, oats, rice, etc.), maize (grain, seeds, sweetcorn), sorghum, potatoes, fodder, fibre flax, tobacco, and related economic sectors.

Created by specialized farmer associations and the sectors that finance it, ARVALIS contributes to developing the production of quality cereals and food and non-food raw materials for local, national and international markets. **In total independence, ARVALIS provides its expertise for the emergence of agroecological production systems combining economic, social, environmental and health performance.**

ARVALIS'S SCOPE OF ACTIVITY

ARVALIS is the specialized agricultural technical institute for the following interprofessional associations and sectors:

➤ CEREALS

With Intercéréales

→ 9.2 MHA OR 32% OF THE UTILISED AGRICULTURAL AREA (UAA)

➤ POTATOES

With the Comité national interprofessionnel de la pomme de terre (National Interprofessional Potato Committee - CNIPT) and the Groupement interprofessionnel pour la valorisation de la pomme de terre (Interprofessional Group for Potato Promotion - GIPT)

→ 200,000 HA OR 0.7% OF THE UAA

➤ FIBER FLAX

With the Comité interprofessionnel de la production agricole du lin (Interprofessional Union representing flax production - CIPALin)

→ 130,000 HA OR 0.45% OF THE UAA

➤ MAIZE AND SORGHUM SEEDS

With the Fédération nationale de la production des semences de maïs et de sorgho (National federation for maize and sorghum seed production - FNPSMS)

→ 70,700 HA OR 0.2% OF THE UAA

➤ TOBACCO

With the Fédération nationale des producteurs de tabac (National Federation of Tobacco Growers - FNPT)

→ 1,000 HA

ARVALIS is also the professional advisor to the Interprofession des semences et plants (French Interprofessional Organisation for Seeds and Plants - SEMAE)

ARVALIS'S WORK,
INCLUDING FORAGE CROPS, COVER CROPS

almost 80%

OF FRENCH FARMLAND.

→ Applied research for farmers and related sectors

ARVALIS support growers and associated industries in their respective value chains. The Institute accompanies them from the evaluation of varieties – according to criteria such as yield and resistance to abiotic and biotic stresses – to the certification of agricultural products intended for processing, thus guaranteeing the physico-chemical, nutritional, technological and sanitary qualities required by the various markets.

ARVALIS's activities in the agricultural sector are a key link in regional economic development and take into account the specific agronomic, pedological and climatic features of each region.

In this context, ARVALIS conducts applied research to establish benchmarks and develop innovations. With its strong regional roots,

the Institute carries out studies and experiments in partnership with those involved in research, innovation and agricultural development. Its aim is to bring together the following elements:

- **economic performance** (productivity, profitability, competitiveness);
- **meet market needs** (food and feed, bioenergy, biomaterials, etc.) in France and on the international front;
- **adapt to regulatory, economic, and social changes and being resilient to climate-related risks;**
- **contribute positively to environmental issues** (reducing inputs, preserving water, capturing carbon, promoting biodiversity and its ecosystem services).

The dissemination of acquired knowledge and the transfer of product information is a key ARVALIS objective, so that its work and results can be directly applied to different production systems by farmers and related sectors.

The Institute uses multi-channel communication. It produces and distributes magazines and newsletters, organizes events such as meetings and field demonstrations, actively participates in a wider community on social networks and is regularly featured in the media, including the trade press.

↓ *Two research technicians observe the potato tubers in the field.*



5 avenues of research for exploring the factors involved in multi-performance

ARVALIS' five areas of research reflect the main expectations of farmers and their industries. Their cross-disciplinary approach reflects current and future technical solutions: combined, multifunctional and complementary innovations. In this way the Institute is helping French agriculture to achieve its sustainability objectives while fulfilling its nutritional role.



DEVELOP PROFITABLE, VALUE-GENERATING AGRICULTURE THROUGHOUT THE COUNTRY

ARVALIS supports agricultural diversity (conventional, organic, conservation, precision, etc.) by researching and developing practices adapted to a variety of situations, generating value through the production of food and non-food goods. To do this, the Institute correlates factors such as changes in regulations and production costs, demands from processors, soil and climate conditions and so on.



ADAPTING AGRICULTURAL PRODUCTION TO CLIMATE CHANGE

ARVALIS aims to help farmers adapt their production and farming systems to make them more resilient in the face of increasingly frequent and extreme risks resulting from climate change. The Institute is also studying ways of encouraging farming practices that will mitigate this change.



↑ Micro-plots for straw cereal research.



REDUCING THE USE OF SYNTHETIC INPUTS AND FOSSIL FUEL CONSUMPTION

ARVALIS's work focuses on the development of integrated alternative solutions linked to the natural internal regulation of agrosystems, to external innovations, or to improving the efficiency of current solutions. It aims to identify and combine multiple drivers and produce an economic assessment of the risk-taking involved.



SATISFYING MARKET DEMANDS AND GUARANTEEING FOOD SECURITY

To satisfy the demands of local, national and export markets, **ARVALIS aims to produce competitive agricultural products in France in sufficient quantities to meet** the technological, health and nutritional requirements of citizen-consumers and manufacturing industries.



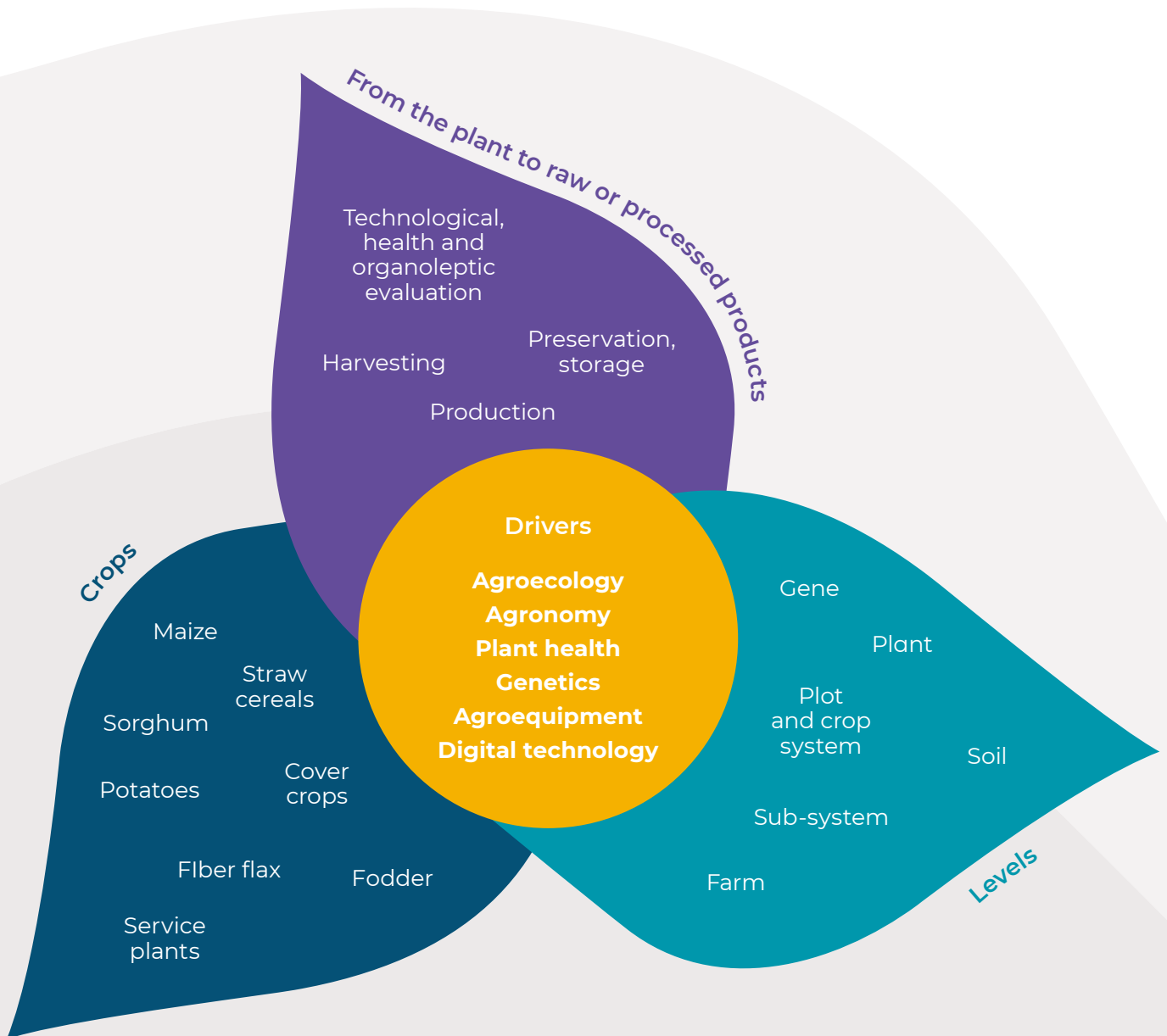
ACTING FOR THE ENVIRONMENT, PROMOTING AND STRENGTHENING BIODIVERSITY

ARVALIS develops and tests agroecological infrastructures and practices that benefit agriculture by increasing biodiversity and improving ecosystem services (pest control, pollination, soil erosion, etc.). The Institute also continues to develop its expertise in carbon neutrality.

→ Multidimensional applied research

ARVALIS's main area of activity is R&D which absorbs the bulk of its resources. The Institute's R&D activities require all drivers to be activated: agroecology, agronomy, plant health, genetics, agroequipment and digital technologies.

These drivers interact at various levels; from genes to soil; at different stages of the value chain; from the plant to end products; for the benefit of all crops studied by ARVALIS.





1. A technical expert uses a LITERAL phenotyping device in the field.
2. A technician makes observations on bread wheat plants in the laboratory.
3. Using a Chopin alveograph to test bread dough flexibility.

DIFFERENT SCHEMES AND PARTNERSHIPS TO RESPOND TO THE MOST TYPICAL SITUATIONS IN FRENCH AGRICULTURE

- **The management and supervision of farmers** encourages efficient, collaborative research between sector experts and stakeholders.
- **Annual research projects and long-term trials** in the field, but also in controlled conditions facilities, in greenhouses or in the laboratory.
- Multi-partner observation and research networks, for example:
 - **SYPPRE®** is a long-term project for “Building together innovative cropping systems for tomorrow”;
 - The **Digifermes®** network, where work on digital agriculture is carried out.
- **Work dedicated to organic farming and soil conservation agriculture (SCA).**
- **Many collaborative research projects at national, European, and international level** involving ARVALIS in Mixed Technology Units and Networks, Scientific Interest Groups or consortia, competitive clusters, and the Carnot Plant2Pro Institute.

Sites and facilities of excellence



-  Headquarters
-  Mobile shelters
-  Dairy or beef cattle
-  Monogastrics facility
-  Flax experimental defibration unit
-  Digifirme®
-  Mobile fogging devices
-  Smart irrigation
-  Light phenotyping equipment
-  Heavy phenotyping equipment
-  High environmental value application farm
-  GENSPAV
-  Parcels equipped with instruments for water quality
-  Quality analysis facilities (grain and potatoes)
-  Greenhouses and climatic chambers
-  Potato storage and R&D
-  Anaerobic digester

In partnership with organisations
(Intercéales, SEMAE, FNPSMS, CNIPT, GIPT, CIPALIN, FNAMS, FNPT)

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Member of



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Over 450

EMPLOYEES (INCLUDING OVER 220 ENGINEERS AND OVER 160 TECHNICIANS)

350

FARMERS MEMBERS OF REGIONAL VOCATIONAL GUIDANCE COMMISSIONS

26

RESEARCH AND TRIAL SITES

More than 1600

AGRONOMIC TRIALS ON 100,000 PLOTS EVERY YEAR

60 M€

ALLOCATED TO R&D AND INNOVATION TRANSFER

Over 200

COLLABORATIVE PROJECTS RESPONDING TO CALLS FOR TENDERS

Over 20

FREE TOOLS AVAILABLE ONLINE

Over 2500

PEOPLE TRAINED OVER 218 TRAINING DAYS EACH YEAR



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www.arvalis.fr

