Learn more about the French Livestock Institute

Our organization
→ P. 2-3

Our international activities
→ P. 10-12
Organization of the French Livestock Institute (idele)

The French Livestock Institute is the French national technical reference and normative body in livestock farming systems. It conducts studies and technical transfer on livestock production techniques (food, genetics, products quality, health...), but also on the livestock farmer profession and on technical and economic competitiveness of farming systems and value chains, complying with social issues such as animal welfare, traceability, environmental issues...

More information: idele.fr

Our fields of activities

The mission of the French Livestock Institute is to improve the competitiveness of herbivores livestock enterprises and value chains. Our work aims at providing answers to farmers raising cattle, sheep, goats and horses, to value chain economic actors and to citizens/consumers, while taking the diversity of national territories and livestock systems into account. Our expertise is vast and requires close collaboration with partners in different agricultural sectors.

More information: idele.fr

From research to development

From applied research to development, in all areas of our business, we are attentive to the expectations of the various stakeholders in order to better anticipate changes. Thus, we can react quickly, conduct the appropriate studies, formalize and communicate up-to-date results allowing stakeholders to better adapt to their environment. Our ability to deliver innovation relies on the wealth of collective knowledge and our ability to assemble and quickly transfer results.

More information: idele.fr

248
is the number of employees in 2013. Among them, 200 PhD, masters of science and technicians working in 30 fields.

Our sites

Where to find us?

With 11 branches and 80 % of our scientific staff located in regions close to livestock farmers, the French Livestock Institute is able to address all French livestock farming systems and to adapt its recommendations to the constraints of the various production areas.

More information: idele.fr

Our competency

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More information: idele.fr
Most of the studies and experiments conducted by the French Livestock Institute rely on experimental farms. These farms are specialized in the various livestock production systems (cattle, sheep, goats), and products (dairy, meat). They are managed by local chambers of agriculture in partnership with livestock organizations. These tools are enriched through European collaborations within research projects. It is completed by a network of commercial farms to observe and assess new techniques.

More information: idele.fr

Eleven research stations and a network of 2,000 commercial farms

Our Experimental Tools

The French herbivores production sector represents a 17 billion Euros turnover and includes more than 200,000 farms. Our objective is to provide farming sector stakeholders, livestock farmers in the first place, with technical elements to improve farm and value chains competitiveness:

- We are adopting new technologies that pave the way to performance improvement with a precision farming approach: electronic identification, new on-farm sensors, etc.
- We are developing our capacity to organize and process information to allow for real-time data analysis
- We work on predicting short-term changes and assessing the medium-term trends which are key information for policy markers.

Last but not least, building the future is also integrating social demands… and we are on it!

More information: idele.fr

Issues and Orientations

Strengthening innovation and building the future

Sharing expertise - fostering communication
THE INTERNATIONAL COMMITTEE FOR ANIMAL RECORDING (ICAR)

Involvement of France in ICAR

France is a founding member of ICAR (created in 1951). France Génétique Élevage is now representing France and is holding since 2010 the ICAR Certificate of Quality for Identification, recording, data management and genetic evaluation of dairy and beef cattle. In the continuity of FGE French activity, ICAR's main aim is:

- To promote the development and harmonization of animal identification, recording and genetic evaluation;
- To establish impartial rules, standards and specific guidelines;
- To encourage the use of the findings of performance recording for assessing the economic value of animals.

It is focused on cattle, sheep, goats and buffalos, for milk and meat production.

More information: www.france-genetique-elevage.org

INTERBULL, A LONG STORY
idele and the international genetics evaluation

Since 1994, Interbull has been developing a service of international evaluation of dairy bulls, including presently more than 30 countries. International evaluations for beef animals (Interbeef) will be implemented soon. In France, idele is the contact for routine international evaluations. R&D topics are major activities of the Mixed Technology Unit (UMT 3G) associating idele, Inra and Unceia: Interbeef, Intergenomics (international genomic evaluation, Brown Swiss), GMACE (international evaluation using national genomic evaluations, Holstein)... UMT 3G participates also in an Eurogenomics working group on the improvement of the quality of genetic evaluations and international comparisons.

More information: sophie.mattalia@idele.fr

MILK PROTEINS
A new reference method

The PhénoFinLait R &D program contributes to build a new method, the MQM (Mass Quant Milk) method, to determine milk proteins composition. This highly resolved and innovative frame combines Liquid Chromatography with Mass Spectrometry. It makes it possible to identify the main milk proteins (caseins, alpha-lactalbumin, beta-lactoglobulin, serum albumin...), their genetic variants and different isoforms (post-translational modifications, splicing variants) as well as to determine their relative proportions. This method was proposed to become an international ISO / IDF standard.

More information: stephanie.minery@idele.fr

BREEDS BIODIVERSITY
Breed conservation: an affective venture

Biodiversity is also among breeders’ concerns! Thanks to their efforts, France is endowed with a wealth of breed variety: more than 50 in ovines for instance.

Idele has been contributing to the conservation of this heritage:
- Already in the 80’s, through on-farm conservation programs development;
- Since 1999, through the collection of biological material at the National Cryobank.

These activities have been globally successful: 11 low-count breeds had their numbers increased by 8 over 30 years and the National Cryobank records show today more than 280,000 samples for 12 different species.

More information: coralie.danchin@idele.fr
**Dairyman**

Focused on 10 dairy regions in North-Western Europe, the Dairyman project brought together the expertise of the Research and Development partners specialized in the environmental optimization of dairy farming. During 4 years, scientists, farmers and advisors achieved a technical, economical and environmental monitoring of 126 pilot farms. Partners were also involved in 9 knowledge transfer centers where innovations were developed to be tested and applied in pilot farms.

The main conclusion of Dairyman shows all the efforts made by the dairy sector to reduce its environmental impacts, to increase its sustainability and to find room for improvement for the future.

More information: sylvain.foray@idele.fr

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**Feeding, Housing, Forage and Environment**

Main challenges for the French herbivore sector

The French herbivore sector has many important challenges ahead. Larger quantities of milk and meat will have to be produced to satisfy an increasing demand. This production will have to be based on highest value coming from fodder and grassland, taking climate risks into account. Animals’ food efficiency and the autonomy of farms and territories should be strengthened too, in order to become less dependent on volatility of food costs. Livestock farming also has to improve its environmental impact as well as to take advantage of all opportunities to produce energy. Among other challenges: renewal of livestock farmers, decrease in working hours and creation of new working partnerships.

More information: andre-le.gall@idele.fr

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**AutoGrassMilk**

Robotic milking for grazing dairy cows

Automatic milking (AM) is becoming more common in the European dairy sector. But it usually leads to a decrease in grazing, with a loss in the potential economic benefit of this forage. The objective of the Autograssmilk project is to develop and implement improved sustainable farming systems that integrate the grazing of dairy cows with AM. This project’s partners are European associations of dairy farmers/producers/processors (SME-Ags) and Research institutes in Ireland, Sweden, Denmark, Netherlands, France (idele, both experimental sites of Derval and Trevarez, Cniel) and Belgium, 2 pilot farmers (Ireland and Denmark) and 4 to 6 monitor farms in each country participating in the project.

More information: www.autograssmilk.eu or valerie.brocard@idele.fr

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**Animal Husbandry Techniques and Environment**

Expertise in animal farming and agronomy

The Livestock Techniques and Environment division has a large expertise. It deals with animal farming, agronomy, fodder production and pastoralism, milking, farm equipments and buildings, environment issues and livestock systems. Studies lean on experiments, observations in farms and modelling. The French Livestock Institute acts in 11 experimental farms located in the main French livestock areas. Our research teams also rely on a network of commercial farms to observe and assess new techniques.

More information: andre-le.gall@idele.fr
Livestock and products quality

Livestock production systems and animal products have been receiving negative criticism in the last years. Beside the questions on animal welfare and environmental issues linked to livestock production, there has been growing concern on the possible link between animal fats’ consumption and cardiovascular diseases despite the evidence that the imbalances in human diet are more linked to vegetal commodities such as soy, corn or palm oil. It is a critical challenge for the French Livestock Institute to keep on defending and promoting the hygienic, compositional, sensorial and nutritional qualities of meat and dairy products in order to maintain the competitiveness of the sector.

More information: koenraad.duhem@idele.fr

> FRENCH AND POLISH BEEF TESTED

MSA system

1,560 consumers (960 French; 600 Polish) have been involved in a large consumer test to predict beef quality according to Meat Standards Australia grading scheme. Eating quality (e.g. tenderness,…) of 6 cuts from 30 French dairy and beef cows and 30 Polish dairy and crossbred young bulls has been assessed. Data are being processed. This thirty month-project is carried out in association with Inra, professionals from the French beef industry, the Polish Beef Association and Warsaw University in Poland, Murdoch University and Birkenwood Pty Ltd in Australia, Teagasc in Ireland and Agri-Food and Biosciences Institute in Belfast (Northern Ireland).

More information: isabelle.legrand@idele.fr

> ECOANTIBIO 2017

Promotion of non-pharmacological prophylaxis

The Ecoantibio 2017 plan aims at reducing the use of antibiotics by 25% in 5 years. The main alternative to drug treatment is prophylaxis which includes sanitary measures and zootechnical practices. The priorities identified include buildings’ atmosphere, selective antibiotic treatment at dry-off period, biosecurity measures and the support to farmers for change. The French Livestock Institute also contributes to awareness on good practices and caution towards antibiotics. The implementation of an Observatory of antibiotics’ use in veal calves is another notable initiative.

More information: valerie.david@idele.fr

> VILLERS-BOCAGE, NORMANDY

The laboratory for analysis and technology of animal products

The laboratory of analysis and technology of animal products is located in Villers Bocage in Normandy. It is staffed with 6 experimented professionals. The 200 sqm laboratory and 120 sqm refrigerated premises are equipped with specific instrumentation and tools, including a pilot-scale meat industry facility. Those facilities are primarily dedicated to perform analytical and technological work in the framework of projects managed by the French Livestock Institute on behalf of partners of the food industry but are also available to partners from the food industry to perform their own projects. Its activities relate to the following areas: microbiological, chemical and sensory analyses; meat technology; on-site interventions.

More information: valerie.hardit@idele.fr
Demand for animal products is very buoyant in emerging countries. This momentum will carry on in the next 10 years according to FAO. However, at the same time, the competition gets harder and harder for the European and French animal products value chains on the world markets. To succeed in this competition, we have to identify our weaknesses and strengths at each link of the value chain.

Our challenges for the coming years: to propose solutions for farming systems to withstand climatic and economic risks and to become less dependent on inputs; to find ways to strengthen mixed crop-livestock farming; to strengthen value chain efficiency…

To answer these challenges, idele’s Economics division focuses on 6 main transversal themes:

1. improvement of competitiveness of French dairy and meat value chains;
2. participation in the creation of added-value for our productions;
3. control of production costs of farm level;
4. simulation of the impact of public policies (CAP in particular) on the whole industry chains;
5. analysis of markets, from short term trends to prospects;
6. improvement of the resilience, the adaptation of livestock farming systems to increased economic risks.

The Economics division counts 20 experts in 2 departments: one of them dealing with market economics (the “GEB”), and the other with farm-level economics (the “S3E”).

More information: philippe.chotteau@idele.fr

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**IDELE ECONOMICS SKILLS**

**Improving profitability of dairy and meat value chains**

For the past 15 years, French animal products value chains have been more and more involved in the global markets. Anticipating this evolution, the French Livestock Institute has chosen to participate in the launching of 2 major international benchmarking macro economic networks.

- The IFCN (International Farm Comparison Network), founded in 1997, for dairy farms (now more than 90 researchers in economics and the same number of countries covered as well as 98% of global cow and buffalo milk production);
- The Agribenchmark network includes: the Beef Network (founded in 2006, covering 25 countries and more than 75% of the world's beef production) and the Sheep Network (founded in 2010, it has grown to 14 countries in 2013).

Those two networks compare typical farms: production systems, production costs and revenues, competitiveness, future development. They exchange methods and compare the results in a wide diversity of countries, situations and systems. IFCN and Agribenchmark produce reports and databases. International organizations, such as FAO or the European Commission, rely more and more on these results and request both networks’ expertise. The other goal of these networks is to favour partnership within the international experts teams.

More information: benoit.rubin@idele.fr

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**INTERNATIONAL RESEARCH**

**Partnership in 2 international economics benchmarking networks**

© Katja Seifert
The French Livestock Institute was requested in 2006 to implement a beef cattle network in New Caledonia’s South Province. Step by step this partnership has been extended to the whole territory. Since 2011 we have been supplying advices and recommendations with bovine charter as a basis. Based on the analysis issued in April 2012, common objectives were defined and shared, which led to the creation of 4 working groups starting in 2013. Precise proposals should be ready at the end of 2013. Some political, professional and administrative officials will come in metropolitan France at the beginning of October to study the organization of the beef supply chain. More information: roger.palazon@idele.fr and christele.couzy@idele.fr

NOWAYS, farmers define more and more their profession in comparison to the general society views. They are proud of working with animals and nature, managing their own business and working days... But they also have to deal with a heavy workload, ethical and environmental issues, fragile economic situations ... Our division studies the diversity of the farmer activities and provides specific ideas and tools to farmers and advisers in order to improve quality of life, income, the strategic orientation plan of farmers and their relationship with the other stakeholders in their area. More information: anne-charlotte.dockes@idele.fr

The division was requested in 2006 to implement a beef cattle network in Lorraine, Wallonia and Luxemburg. After a previous work on multifunctional livestock, this Interreg IV program dealt with the energy efficiency of livestock farms. It relied on eight R&D partners from three areas (Lorraine, Wallonia and Luxemburg). Energy consumptions and greenhouse gas emissions were calculated in 280 livestock farms dedicated to cattle, sheep or pigs. This information allowed us to estimate the impact of changing practices in the area. Partners aim at improving this work in the field of livestock systems sustainability, thanks to an upcoming cross-border program. More information: laurence.echevarria@idele.fr and bernard.morhain@idele.fr

Our Main Skills

Advice, sociology and farming systems
The division develops many specific skills: sociological methods (surveys, focus groups, interviews ...) for extension activities; farming system approaches; facilitation methods; elaboration of advisory tools and projects; farmer profession and work organisation on farm; quality schemes...
More information:
anne-charlotte.dockes@idele.fr

Farmworks and Society

The Livestock farmer profession and social approaches division

Decreasing greenhouse gas in Lorraine, Wallonia and Luxemburg
Renovation target of the SNIGs

The SNIGs constitute a national information system that ensures, for the purpose of genetic improvement of livestock, collection, centralisation, use and dissemination of parentage, zootechnical data and breeding values of the ruminant livestock. France Génétique Élevage approved in early 2013 a renovation plan of the SNIGs (2013-2015) based on deep structural changes affecting both governance, regulations, contractual environment, business model, organisation and technical architecture. These changes are ambitious but do not present a major risk during implementation because they have been designed especially for their "backward compatibility" with the existing system.

More information: beatrice.balvay@idele.fr

INFORMATION SYSTEMS AND DATA PROCESSING
Livestock enters the digital age

We live in a time of rupture, overall digitisation of everything. Everything becomes digital data and is intended to exist in the emerging virtual world. The world of farming is no exception and we must assert our ambition to be a major player in the coming years. The "Information Systems and Data Processing" transverse field of the French Livestock Institute illustrates this evolution and contributes to the establishment of an interoperability framework to facilitate access and enhancement of these digital data to the benefit of the livestock sector competitiveness. With its French and European partners, the French Livestock Institute contributes to the emergence of digital services and the enhancement of existing databases on the service of farmers and their networks.

More information: pascal.poitevin@idele.fr

FAO COMMITTEE ON WORLD FOOD SECURITY

G8 International conference on open data for agriculture

In 2012, a reflection around a shared global platform has been entrusted by the G8 to the Committee on World Food Security of the FAO to develop prediction models for the global food production. France is directly involved via Agreenium, Inra, Cirad, Ird in particular. Data from livestock information systems are a mine of information allowing us to contribute to this objective. The movement of Big data and Open Data aims at improving the efficiency of data processing with the goal to ease their accessibility for processing. The challenge also is to identify, to integrate and not to lose research data that could be useful.

The following example of open data processing of meteorological data shows how uplifting the improvement of prediction for the last 30 years has been.

More information: pascal.poitevin@idele.fr
Livestock identification & traceability systems (LITS) gain much importance in the world. Drivers are numerous: theft prevention, disease control, international livestock market access, genetic improvement. In pastoralist areas, implementation of LITS is complex because of existing different geo-political inclinations, geography, diversity of cultures, value attached to livestock etc. In fragile economies, as LITS are expensive ventures, cost/responsibility sharing mechanisms between government and industry must be carefully designed. European LITS models are unlikely to offer ready-made solutions. Still, thanks to idele's historical experience, Mongolia and Burkina Faso called for the support of the French institution. More information: arnault.villaret@idele.fr and erik.rehben@idele.fr

> LIVESTOCK IDENTIFICATION AND TRACEABILITY SYSTEMS

A challenge in pastoralism

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> INTERNATIONAL TECHNICAL ASSISTANCE

Combining international expertise

The key to success on international technical assistance markets lies in a smart combination of accurate corporate expertise in sector development, relevant methodology and proven geographical experience, at competitive rates. Still, the relevance of the experts’ profiles always makes the difference. To promote the French expertise, BCTI calls on French livestock professionals allied to international experts selected from a roster of several hundred high caliber resumes. When associating with a consulting company to form a competitive consortium, when specific geographical experiences are required for instance, idele will favor carrying the position of team leader as it offers the best control and visibility. More information: florence.macherez@idele.fr

> CAMEROON

A target for French genetics and services

Idele offers mentorship support to the EU funded PAPA program aiming at improving family farms income through more efficient business networks, land use and production support. The supported mission was to strengthen the structure of the dairy value chain through the creation of a House of Livestock and Sustainable Development (MEDD). The MEDD is intended to be a gathering place for the exchange of experience, supporting technical organizations (milk recording...), offering training and technical support to breeders. A major outcome is the identification of the need to quickly provide productivity enhancement solutions to secure the ownership of the MEDD by the farmers. Undoubtedly this will entail on further demands for technical assistance and genetic improvement. More information: philippe.ame@idele.fr

> ZIMBABWE

A new success for BCTI

BCTI (International Technical Cooperation Bureau) and its partner CA17 International have been awarded the execution of a World Bank funded livestock sector study in Zimbabwe (ruminants, pigs, and poultry). The study aims at (1) providing an analysis of the major livestock production systems, beneficiary groups, and the institutional environment, and (2) proposing a pre-investment framework to provide guidance to public and private sector decision makers to identify priority support & investments programs. This is the second World Bank award for BCTI and a first opportunity of joint work for several prominent French livestock technical institutes. More information: philippe.ame@idele.fr
The Charter for Good Agricultural Practices promotes the quality of the cattle profession in France. It accompanies farmers in their practices (traceability, herd’s health, food, milk quality, animal welfare and environment), helping them to meet the expectations of both their partners and citizens. The Charter is the leading farmer quality assurance scheme in Europe and brings together 107,000 farmers. Over 90% of milk and over 77% of beef produced in France come from a farm that adheres to the Charter. The Charter benefits from the expertise of the French Livestock Institute. The scheme introduces its new English website: www.charte-elevage.fr/en

More information: delphine.neumeister@idele.fr

> THE CHARTER FOR GOOD AGRICULTURAL PRACTICES

New website in English

The French Livestock Institute participates in the cofinancing of Feedipedia, the global online encyclopedia of raw materials and fodder for animals. This database is a joint project of Inra, Cirad, FAO and AFZ. It provides information and offers effective help to identify alternatives for livestock feed in special conditions of development, particularly in the South. This tool will be feeded-up and updated regularly. Experts’ feed-back on products or by-products described will be taken into account.

More information: www.feedipedia.org

> FEEDIPEDIA

On line encyclopedia

The French Livestock Institute promotes biodiversity management, technological innovations and sanitary safety, and based on rigorous scientific methods and efficient information systems, French breeding programs have been contributing for 30 years to increase the visibility of French breeding among the world leaders. The continuous adaptation of the products, services and facilities supply to the changing needs of farmers, industries and society is led by France Génétique Élevage (FGE) a national entity gathering all the organizations contributing to the French cattle, sheep and goats breeding systems. The French Livestock Institute is the backbone of this vast collective breeding system. It has been appointed, in collaboration with Races de France, to design FGE new website (more than 100 articles, 400 photographs, 80 external links and many downloadable documents available). This new website, with English and Spanish versions, allows French and foreign professionals of the livestock sector to discover or know better the different facets of French genetics and breeding programs as well as learn about key national and international events related to them.

More information: arnault.villaret@idele.fr, www.france-genetique-elevage.org

> FRANCE GÉNÉTIQUE ÉLEVAGE NEW WEBSITE

Presenting French genetics

International cooperation

The French Livestock Institute provides foreign farmers, technicians, PhD masters of science with tailored practical and theoretical training programs on all topics related to livestock farming. It organizes study tours in France to discover different production areas and livestock stakeholders. The partnership newly established with the Poisy Livestock training Centre (near Annecy) allows for on-farm vocational education and training programs with a practical approach of dairy cattle farming.

More information: florence.macherez@idele.fr

> INTERNATIONAL PARTNERS

On-farm vocational education and training
> OFFICE FOR INTERNATIONAL TECHNICAL COOPERATION

**Promoting development**

Hosted by The French Livestock Institute, the BCTI (International Technical Cooperation Bureau for all French livestock farmers’ organizations) has high-level expertise offering technical support to 3 major target groups. First, it provides institutional support to governments for the preparation of public policies and sector organization: masterplan formulation (Burkina Faso, Zimbabwe, Senegal…), sector strategic analysis (Kazakhstan), institutional and organizational support (Albania), establishment and supervision of national mechanisms (Morocco, Mexico, India, Mongolia…). Secondly, it supports livestock farmers and their organizations in genetic improvement management (Brazil, Morocco), livestock techniques acquisition (Turkey), product quality improvement and organization of training-extension services (Albania). Finally, it also provides expertise in farm management and agro-industrial projects, development and integration (corporate and value chain development: Danone group, private local investors in Mediterranean areas, China, Russia…).

More information: florence.macherez@idele.fr (Asia), arnault.villaret@idele.fr (Latin America and Africa), michel.vaucoret@idele.fr (Middle-East and CIS)

> IDELE AND EU

**A key player in European R&D**

The French Livestock Institute is a major player in the EU-27 research-development livestock farming science sector. With more than 200 masters of sciences and PhDs endowed with multiple regional experimental locations, idele is a recognized partner for tackling transnational issues impacting dependency between agriculture and other human activities: environmental integration of livestock, product quality, animal welfare. Its scientific teams are engaged in partnerships with dozens of EU R&D organizations, through 50 projects, among which 13 are under active implementation all across Europe.

More information: koenraad.duhem@idele.fr

> EUROPE: HORIZON 2020

**A new EU framework for research funding**

In 2014, research, development and innovation in the European Union will be funded within a new and unique framework program, called Horizon 2020, replacing the previous Seventh Framework Programme (FP7). Horizon 2020 will come into force on the 1st of January 2014; it aims at giving a frame to the EU research and innovation programmes for the 2014-2020 period. Its budget of about 80M € is doubled compared with the previous FP7’s. It will be built on the 2020 strategy and address society challenges, focus on key technologies, facilitate collaborative research, and rationalize and simplify access to the tools in an industrial spirit. Support to innovation and to SMEs in particular will hold a greater place. Horizon 2020 is structured according to three priorities associated with various financing tools. The French Livestock Institute will focus on the "Societal challenges” component, in particular Challenge 2 dealing with "food security, sustainable agriculture, bio-economy."

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