

# DRAWING ON RESEARCH AND INNOVATION TO RESPOND TO LIVESTOCK INDUSTRY FACING ISSUES

#### Assets from a network

Backed by INRAE, France Futur Élevage brings together the expertise of world-class academic agro-veterinary research bodies and the R&D expertise of three leading international agricultural technical institutes in livestock industry services.

Their multidisciplinary expertise allows France Futur Élevage members to conduct R&D projects across a wide range of technological maturity, from fundamental research to development, in 4 distinct areas:

- Improving animal well-being and livestock farming practices
- Improving genetic selection and reproduction strategies
- Improving the prevention, detection and management of livestock diseases
- Understanding the factors driving socio-economic changes in the livestock industry

France Futur Élevage seek progress at the individual level, for regions, and for the industry as a whole.





## **Target markets**

- Agriculture / livestock
- Agrifood
- · Veterinary diagnosis and drugs
- Digital

#### **Competences**

- Animal physiology
- Farm equipments and livestock buildings
- Precision livestock farming
- Animal nutrition
- Animal genetics
- Reproduction
- Infectiology
- Host-pathogen interactions
- Toxicology and pharmacology
- Livestock systems
- Modelling
- Epidemiology
- Ethology











#### Original resources available

- Animal experimentation platforms (confined or not) that can host animals ranging from fish to lactating cows at confinement level 3.
- Insectariums: ticks and disease-transmitting insects
- Collection of pathogenic bacteria from over 2500 strains
- Surgery and imaging applied to experimental models
- Multiple animal models: mice, arthropods, ruminants, pigs, poultry, fish, rabbits
- Spatio-temporal tracking of pathogenic agents and carriers
- Multiple high-capacity "omic" platforms
- Processing and analysis capacity for massive data volumes
- Network of experimental farms in collaboration with partners in the field, allowing for experiments in real production conditions
- Alternatives to animal experimentation: systems for in-vitro study, organoids, ...

### **Examples of collaborative projects conducted** with socio-economic partners

- Evaluation of the impact of combining tannin sources on sheep digestive systems while controlling parasites
- Development of a methodology for evaluating animal well-being in the poultry and rabbit sectors
- Search for new sources of protein for feeding broiler chickens
- Evaluation of digestive efficiency in pig breeding
- Evaluation of the environmental footprint of the products of ruminant livestock operations
- Improved human resources management in cattle farming
- Early automated detection of respiratory problems in young cattle

## **Key figures**

**Permanent staff** (full-time equivalent): 1130 PhD Students: 170

Partnership incomes with industry: €13M Global budget: €118M

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