

Science to
feed

a future

of sustainable
wellbeing

IRTA^R



Generalitat
de Catalunya

MANIFESTO 2026 – 2030

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MANIFESTO
2026 — 2030

For a future of
sustainable wellbeing



Generalitat
de Catalunya

Who we are

We are more than a thousand professionals, from forty nationalities and multiple disciplines, working across the board throughout Catalonia and connected with the five continents to tackle the main challenges of food.

We were founded in 1985 following a law passed by the Catalan government, we are registered as a state-owned enterprise and we are members of the Catalan CERCA system of centres of excellence.

Over half of IRTA's professionals are women and one quarter come from other countries.

We research, innovate, advise and disseminate our knowledge for the environmental, economic and social sustainability of the Catalan agri-food sector, promoting its resilience and that of the territory.

We work to provide safe, high-quality food that contributes to a healthy diet and supports wellbeing of the **population**. We bring science closer to people, to help them develop a critical, well-grounded perspective in a world full of disinformation.

We deliver scientific information to the **government**, so that it can make rigorous decisions.

We do all this **in partnership** with national and international research centres, universities, institutions and businesses.

How we do it

With:

Integrity: We are a non-profit government institution; we work transparently and rigorously.

Commitment: To the land, the sector and society.

Excellence: We work to offer the highest possible quality in everything we do.

Respect for the environment: In every project and activity, we make efficient use of resources, minimise emissions and promote the circular economy.

These are our values.

Why we do it

We want to help **transform** food systems for a future of **sustainable wellbeing**.

This is our purpose.

What's happening in the world

We face **global food challenges** of great complexity that already condition our lives and will determine the existence of future generations.

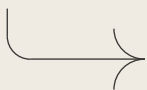
These challenges, which we must address from the specific perspective of Catalonia, determine the fields of research in our scientific programmes.



Over the next decade, we will probably experience more extreme droughts like in 2023

Catalonia experiences severe **droughts**, long periods of high temperatures and episodes of sudden, abundant rainfall.

These changes to the climate affect the biodiversity of land and sea ecosystems, strain the ability of plants and animals to adapt and damage **soil** that has already been **degraded** by years of intensive farming methods. As a result, the Catalan agri-food sector, which is the leading industrial sector in terms of employment and turnover, is being pushed to its limits.



We need to adapt to climate change, contribute to mitigation measures and guarantee the resilience and sustainability of the agri-food sector.

Food systems significantly affect the planetary boundaries

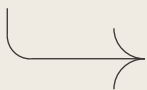
8



Transport, industry, energy, agriculture and livestock breeding are the biggest emitters of greenhouse gases in Catalonia

Food systems (the way we produce, process, distribute, consume and waste food) have a clear impact on **climate change** and on our **health**.

From a global perspective, food systems are one of the biggest causes of **overshooting planetary boundaries** – the nine key processes for Earth’s stability. At the same time, although we now have the capacity to feed ourselves better than ever, millions of people go hungry, and rates of overweight and obesity are rising due to a lack of access to a healthy diet.



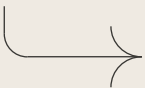
We need to move towards more sustainable, fair, equitable and healthy food systems within planetary boundaries.



During the last three decades, over 30 new human pathogens have been identified, 75% of which originated in animals

Globalisation, increasingly intensive food production and climate change all create the conditions in which pests and infectious diseases can appear and spread. This has a direct impact on food safety, the agri-food economy and the health of ecosystems, animals, crops and people, which are all interconnected. This interconnection can be summarised by the term **One Health**.

Furthermore, the extensive and often inappropriate use of antibiotics in humans and animals over recent decades has enabled **resistant bacteria** to appear, increasing the risk of deaths from bacterial infection.



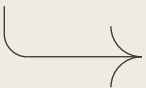
We need to prepare, anticipate and offer a coordinated response to the health and food challenges of the 21st century, which span the globe and many sectors.



A small number of Catalan farms use sensors to collect data on the use of fertilisers, pesticides or water

Digitalisation, led by artificial intelligence (AI), the Internet of Things and robotics, is **changing the way we all live at a rapid pace**. It means we can collect data faster and more efficiently using sensors; send data wirelessly to cloud-based databases; use AI to analyse them in large quantities, and use that data to take decisions in the field, on farms and in the food industry.

Digitalisation has as much **potential to transform** agriculture, livestock breeding, aquaculture and the food industry as did mechanisation in the 19th century or the green revolution in the 20th.



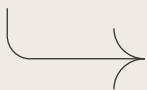
We need digitalisation to boost the environmental, social and economic sustainability of the agri-food sector and to help make it more attractive to future generations.



Catalonia's food-producing autonomy is estimated at between 40 and 50% of its needs.

Globalisation generates inequalities in the **regulation** of food production and distribution, which means that our agriculture sector works with very slim profit margins.

Geopolitical tensions and international competition for resources highlight Catalonia, Spain and Europe's **dependence** on the rest of the world for its energy and food supply. **The next generation** of farmers and livestock breeders in Catalonia is in question, and with it the economic, environmental and social sustainability of our rural areas, as populations are likely to concentrate increasingly in cities and suburbs.



We need to encourage the next generation in the Catalan agri-food sector, improve its connection with the population and improve food self-sufficiency.

A crucial moment

We are at a crossroads in human history. How we tackle global food challenges will determine the **future of people and the planet.**

At IRTA, we are working towards a future of **sustainable wellbeing**, and we want to help **transform food systems** to make it possible. From the field, the farm and the sea to the table.

Most of all, we want Catalonia and its agri-food sector to **lead** that transformation.



At IRTA we have contributed to the enormous progress that the Catalan agri-food sector has made over recent decades, and now we see this crucial moment as a great opportunity.

- An opportunity for **the economy and the environment** to work hand in hand; for rural and urban worlds to reconnect, and for food production to combine the three types of sustainability: economic, environmental and social.
- An opportunity for economically **viable and diverse** agri-food models to coexist in the future; for intensive and extensive livestock production not to be mutually exclusive, to provide support for a generational handover and to increase the resilience of rural areas.
- An opportunity to **work together** to find answers: local people and organisations, the farming sector, research centres and universities, and authorities.

Ultimately, it is an opportunity to build a future of sustainable **wellbeing, in which people, animals and the planet are integrated** in mutual support.



The road to sustainable wellbeing requires a transformation of our food systems, because what we have been doing until now has brought us to where we are today: a world that has access to a wide variety of foods throughout the year, but that is running out of natural resources and does not ensure equal access to food, and where animal welfare and wellbeing need improvement.

As a result, we clearly **need a new approach, which can emerge from partnerships** between all food system stakeholders.

Therefore, while we maintain our global vision and a local focus on Catalonia, **IRTA is currently structuring its research and innovation around four major fields:**

- 1 Resilience to climate change.
- 2 Sustainable intensification of production.
- 3 One Health.
- 4 Digitalisation and transformative technologies.



Within this context, we must:

- Ensure that the artificial intelligence, Internet of Things, sensor and robotics revolutions mean greater environmental, social and economic **sustainability** for the sector.
- Contribute to **the resilience and the generational handover** of agricultural producers, livestock farmers and fish farmers, against a backdrop of climate change and globalisation.
- To be leaders in the still insufficient knowledge about **regenerative agriculture** or **new sources of protein** that can be produced in Catalonia, and take advantage of the opportunities offered by the **bioeconomy** in our region.
- Generate the knowledge and infrastructure needed to respond to emerging pests and infectious diseases affecting the agri-food sector and **global health**. And contribute to reducing antibiotics use in animals, to prevent resistance and improve health and welfare.

We research and innovate in a **transdisciplinary manner**, spread across our research programmes in the Animal, Plant and Food Industries areas.



Global challenges

- Climate change is a reality
- Food systems significantly affect the planetary boundaries
- Digitalisation revolutionises the way we live
- Health is a global issue
- Globalisation affects food self-sufficiency

Research fields

Resilience to climate change

Sustainable intensification of production

Strategic goals

- 1 Boost the digital transformation of the agri-food sector
- 2 Optimise water management for agricultural use
- 3 Improve carbon sequestration and soil health
- 4 Promote the bioeconomy by valorising organic waste and agri-food by-products

Talent

+1.000

PROFESSIONALS

Alliances

1. Agri-food sector
2. Research centres and universities
3. Governments
4. Society

Clients

+470

IN CATALONIA

+330

IN SPAIN

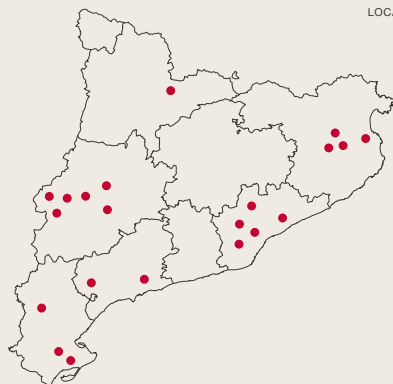
+180

INTERNATIONALLY

Presence in the territory

21

LOCATIONS



Research areas

PROGRAMMES

Animal

Marine and continental waters
Aquaculture
Animal welfare
Genetics and animal breeding
Animal nutrition
Ruminant production
Animal health
Sustainability in biosystems

Plant

Sustainable extensive crops
Fruit growing
Genomics and biotechnology
Post-harvest
Sustainable plant protection
Efficient use of water in agriculture

Food industries

Food safety and functionality
Food quality and technology

Agri-food economy

Digitalisation and transformative technologies

One Health

5

Boost the alternative protein sector

6

Guarantee animal health and welfare in the context of reduced antibiotic use

7

Enhance resilience to emerging biological risks

8

Boost research into viticulture in response to the new challenges facing the sector

IRTA over the next decade

Major global challenges and the characteristics and needs of the territory we work for do not only condition our current research fields and strategic goals - they also shape our future.

From this global and local perspective, we have already begun to sketch out our work for the 2030s, across five priority areas.



- 1 That the **best professionals** in our field want to be part of IRTA, attracted by our purpose and because we carry out activities aimed at generating a real impact on the territory, the sector and society.
- 2 Invest the necessary economic resources in the maintenance and renovation of facilities and in the implementation of new **infrastructures** that will be strategic for food, health and well-being in Catalonia, and that will allow us to continue to be international leaders.
- 3 Open new lines of cutting-edge research, which will not have immediate application but will most likely be necessary in the not-too-distant future. For example, projects in the field of **gene editing** or the creation of an **organoid bank** to reduce the need for research involving live animals.



- 4 Continue to provide technical support to Catalan **government institutions** in their decision making and **expand IRTA's presence** in those sectors or areas of the country that request it, such as mountainous areas or the wine-making sector, which is especially affected by climate change.
- 5 Ensure that our research has the **highest possible impact** on society, guaranteeing that all the knowledge we generate reaches the sector and that the innovation we support adds a competitive edge. And open up new lines of work, such as consulting, support for **entrepreneurship** and the **export** of agri-food knowledge and technology emerging from our territory.

The **21st century** is full of challenges and uncertainty. At IRTA we choose to act with responsibility, **rigour and hope**, to take committed and brave decisions and to work in generous partnership.

We want to continue to be the **reference** for research and innovation in the Catalan agri-food sector.

We also want the Catalan agri-food system to be a global benchmark for social, economic and environmental sustainability.

PONENT

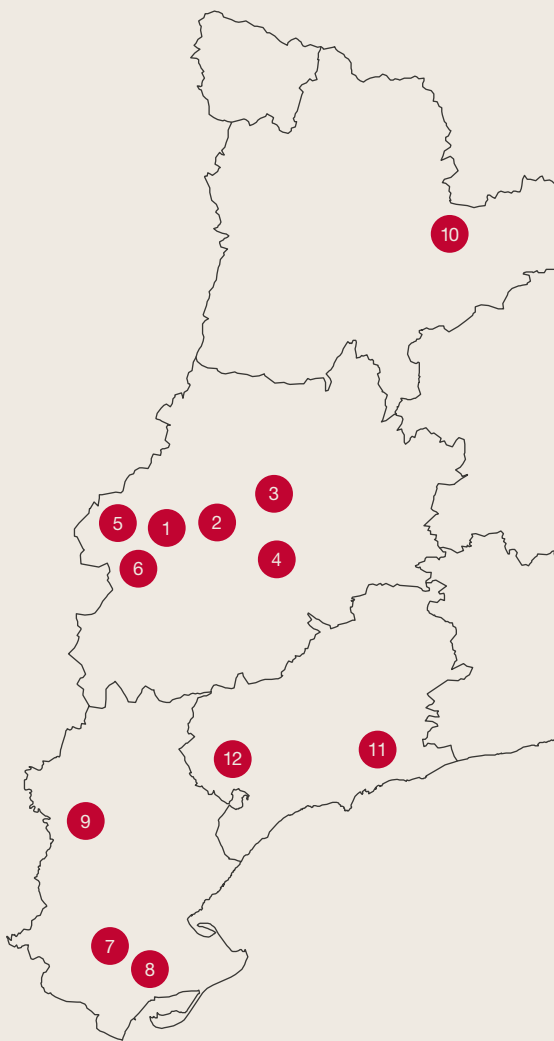
- 1 **IRTA Fruitcentre Centre**
Lleida
- 2 **IRTA Agronomists Centre**
Lleida
- 3 **IRTA Mollerussa
Experimental Farm**
Mollerussa
- 4 **IRTA les Borges Blanques
Experimental Farm**
Les Borges Blanques
- 5 **IRTA Gimènells
Experimental Farm**
Gimènells
- 6 **IRTA Alcarràs
Experimental Farm**
Alcarràs

TERRES DE L'EBRE

- 7 **IRTA Amposta Centre**
Amposta
- 8 **IRTA la Ràpita Centre**
La Ràpita
- 9 **IRTA Gandesa
Experimental Farm**
Gandesa

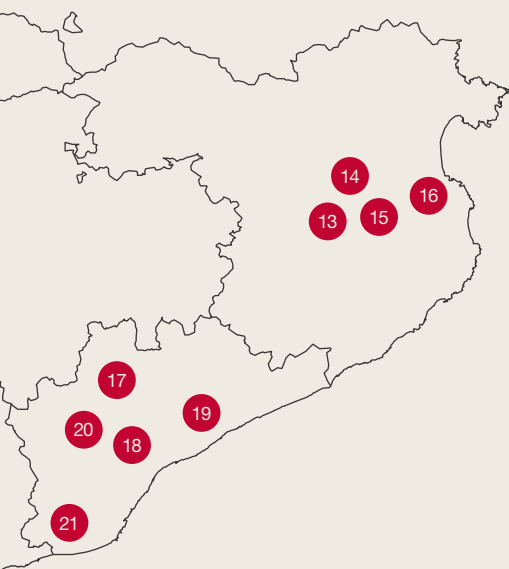
CAMP DE TARRAGONA

- 11 **IRTA Mas Bové Centre**
Constantí
- 12 **IRTA Vitec Centre (underway)**
Falset



ALT PIRINEU I ARAN

- 10 **IRTA Pyrenees Centre**
La Seu d'Urgell



COMARQUES GIRONINES

- 13 **IRTA Monells Centre**
Monells
- 14 **Pork Experimental Farms**
Monells
- 15 **Experimental Dairy Farm (EVAM)**
Monells
- 16 **IRTA Mas Badia Centre**
La Tallada d'Empordà

BARCELONA

- 17 **IRTA Torre Marimon (Corporate Headquarters)**
Caldes de Montbui
- 18 **IRTA Research Centre for Animal Health (IRTA-CReSA), UAB Campus**
Cerdanyola del Vallès
- 19 **IRTA Cabrils Centre**
Cabrils
- 20 **Centre for Research in Agricultural Genomics (CRAG), Consortium Centre, UAB Campus**
Cerdanyola del Vallès
- 21 **Research Centre for Agrofood Economics and Development (CREDA), Consortium Centre, UPC Campus**
Castelldefels





At IRTA we do science
to feed the future.

Today, we want to help
transform food systems
for a future of sustainable
well-being.

Will you join us?