

INOSYS “farm models”

A national living lab to simulate change and
explore adaptation pathways in French
livestock systems

ATF symposium with EAAP Commissions on "Livestock Farming Systems"
and "Sheep & Goat"

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An observatory but not just that...

- **How can we assess the impacts of climate change on livestock farms without a detailed understanding of how these farms actually operate?**
 - > Climate change
 - > Economic volatility
 - > Societal expectation
 - > The need to anticipate rather than observe change
- **INOSYS is much more than an observatory.**
 - > It's a network of actors: breeders, advisors, engineers, ...
 - > It's a living infrastructure to produce references and support transitions in livestock systems
- **France's answer to this challenge has been the INOSYS Livestock Network, a national monitoring system that has been operating for more than 40 years.**

What is INOSYS ?

- To produce and disseminate technical and economic references on the operation and sustainability of French livestock farming systems

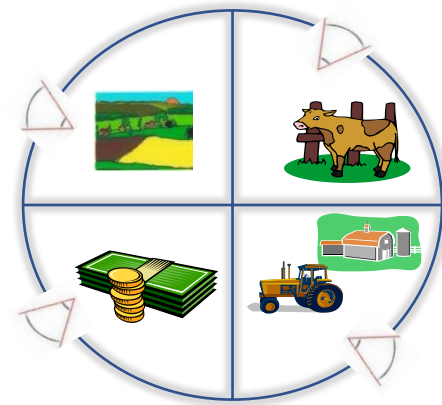
Main targets: *breeders, advisors, decision-makers, teachers*

- A network of 1,500 livestock farmers, supported by 250 advisers from the Chambers of Agriculture (and others...)

Organisation: *30 teams by sector or basin, 18 thematic networks,
1 Methods, Tools and Training Support Team*

- An holistic approach : from technical and operational aspects to economic, social and environmental performance

A unique territorial network to cover the diversity of livestock systems.

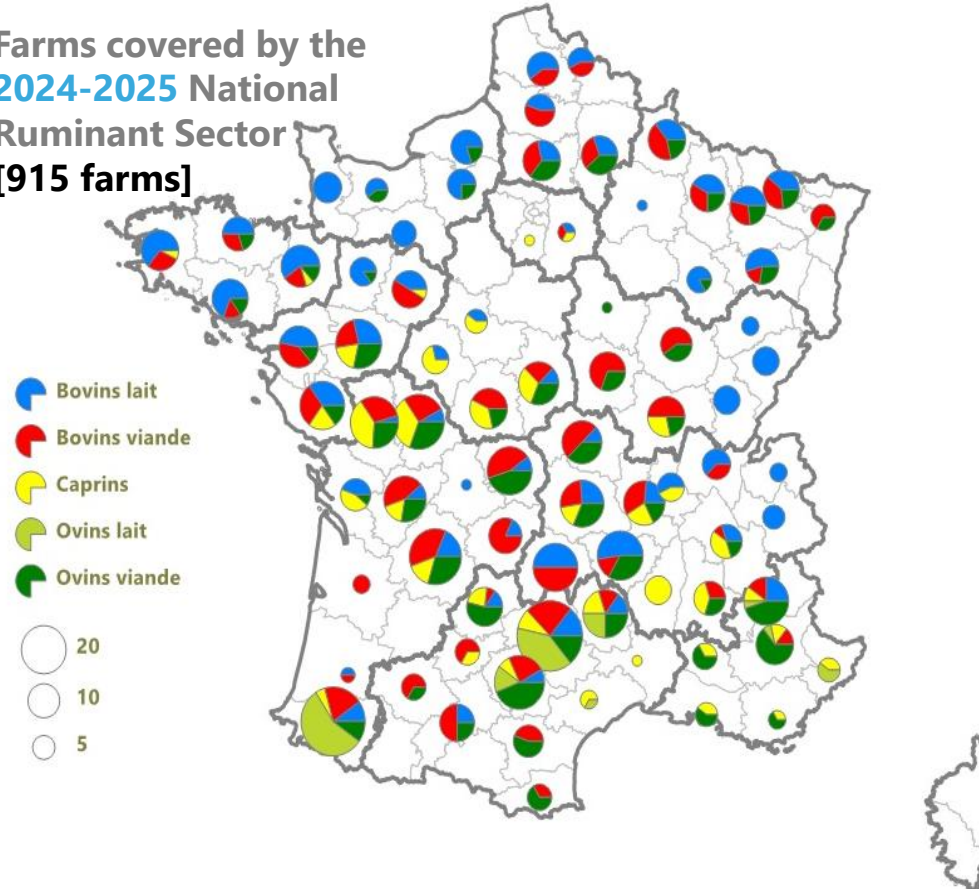


Two pillars

National core

to monitor the collective trajectory of frequent systems at the level of sectors

Farms covered by the
2024-2025 National Ruminant Sector
[915 farms]



Thematic networks

to support the board on emerging or transitioning systems

Farms covered **2024-2025**
[185 farms – ruminant sector]



An historical partnership: 40 years !

< 1980	The early stages... GEDA/GVA		
Années 80	 	Réseau EBD / RNED ovin	EBD stock
Années 90		RESEAUX D'ELEVAGE pour le Conseil et la Prospective	DIAPASON DOS
2000-2006		RESEAUX D'ELEVAGE pour le Conseil et la Prospective	DIAPASON
2007-2013		RESEAUX D'ELEVAGE pour le Conseil et la Prospective	DIAPASON
2014-2020		INOSYS Réseaux d'élevage	Diapason
2021-2027		INOSYS Réseaux d'élevage	Diapason LA BASE DE DONNÉES INOSYS

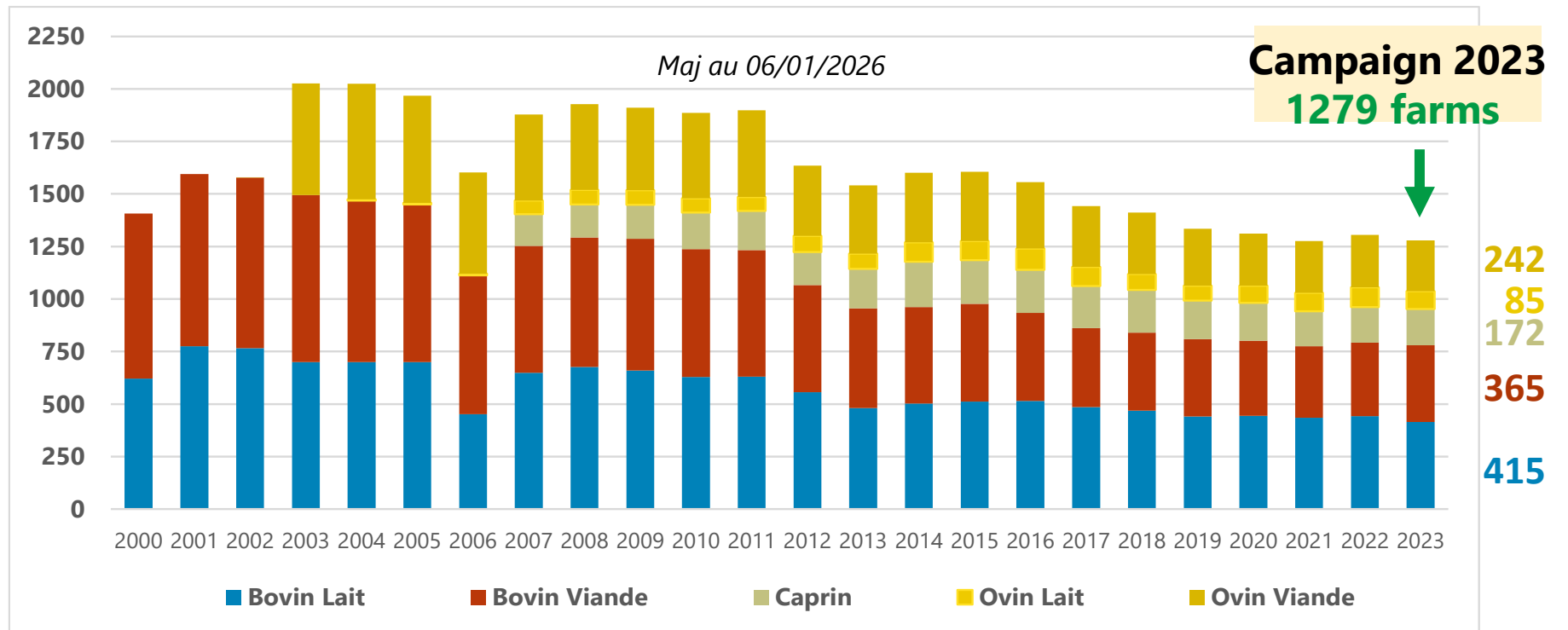
2007: Launching of Horses farms network
 2016: Launching of Calves farms network
 2024: INOSYS Construction: Poultry and Rabbit Farming Networks

Data history « farms »

- A goldmine for analysing long-term trends

nb of farms

39 000 years x farms



The outputs...

The INOSYS Observatory – Livestock Networks

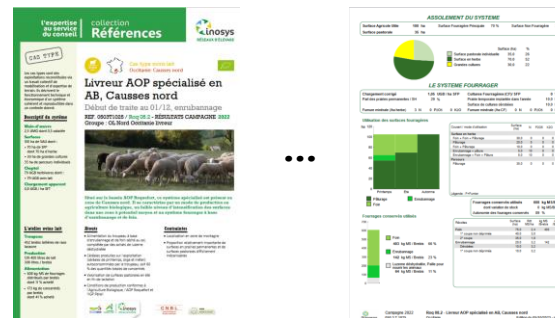
the results from more than 60 groups of farms monitored as part of the 'observatory' component



Tools for decision-making support and advice

A library of over 250 farm models

Coherent system models that reflect diversity, developed by the teams



More than 150 national and regional deliverables per year



...

... and all the other contributions!

Outputs available to everyone in just a few clicks




Portail inosys : Accueil

portail.inosys-reseaux-elevage.fr/FR/index.awp

inosys
RÉSEAUX D'ÉLEVAGE

Présentation

[Me Connecter](#)

Bienvenue sur le Portail inosys

LE SITE DE RÉFÉRENCE(S) DES RÉSEAUX D'ÉLEVAGE



bovins
lait



bovins
viande



caprins
lait



équins



ovins
lait



ovins
viande

Bibliothèque des cas-types

Réalisez vos propres sélections de cas-types par une recherche multicritères parmi l'ensemble des collections régionales

Panels nationaux des cas-types

Accédez directement à une sélection restreinte de cas-types d'intérêt national pour chacune des filières d'élevage

Observatoire Inosys Réseaux d'élevage

Retrouvez ici les résultats technico-économiques des groupes de fermes en suivi Inosys Réseaux d'élevage

Publications et outils

Voir les dossiers et publications annuelles et thématiques des équipes Inosys Réseaux d'élevage

Mentions légales • Inosys Réseaux d'élevage • Contact • Suivez-nous sur  

Avec le soutien financier du comité d'orientation agricole et de la souveraineté alimentaire CASAD

MINISTÈRE DE L'AGRICULTURE ET DE LA SOUVERAINETÉ ALIMENTAIRE

INSTITUT DE L'ÉLEVAGE **idele**

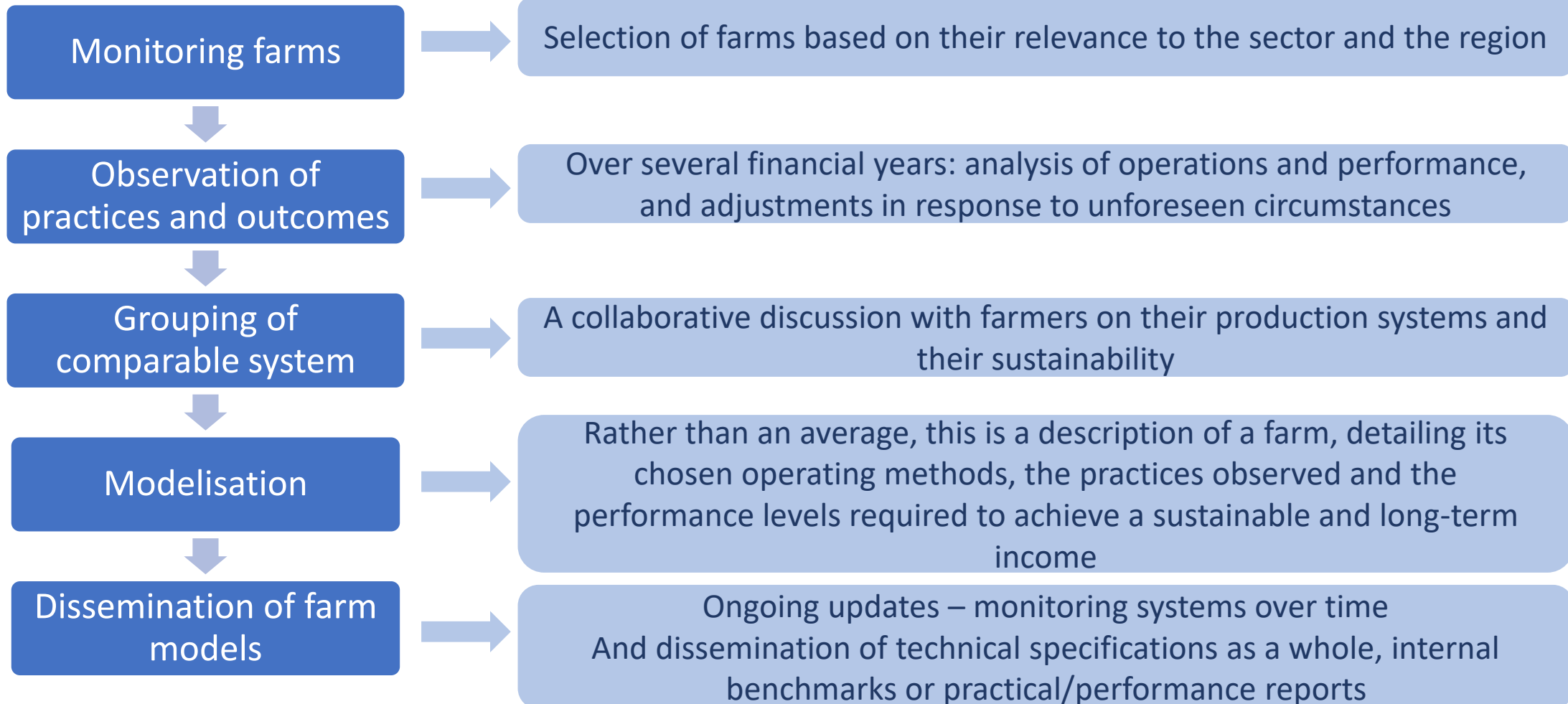
CHAMBRES D'AGRICULTURE

inosys
RÉSEAUX D'ÉLEVAGE

An example of how it is used

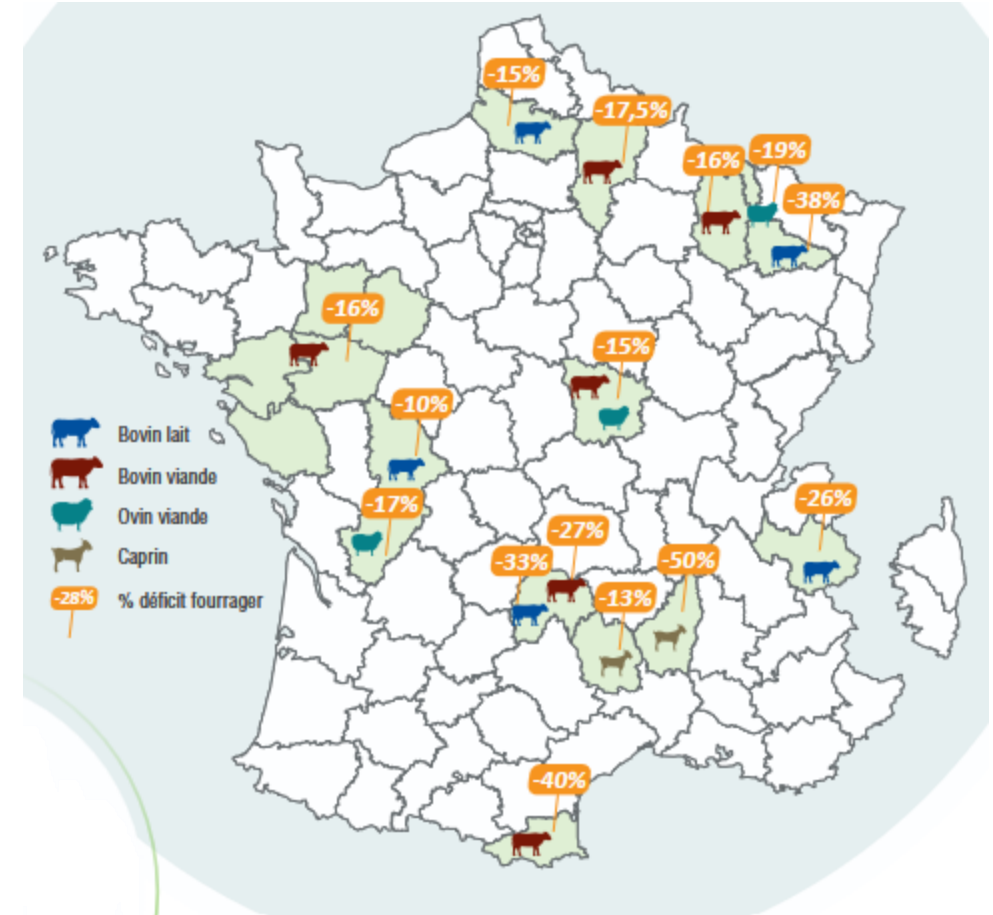


What is the process to build a farm model?



How does INOSYS help analyze climate change adaptation?

- 16 INOSYS farm models (dairy/beef cattle, sheep)
- We simulated the impact of 2022-like climate risks.
- Two scenarios for each farm model are compared:
- **Script 0 (S0):** The farm model has been adversely affected by adverse weather conditions. A contingency measure has been put in place to ensure the herd can be fed; in most cases, this involves the purchase of forage (subject to availability).
- **Script 2 (S2):** This is the most complex combination of levers that has been studied. This scenario combines both herd- and area-based levers, which have an impact in the medium term

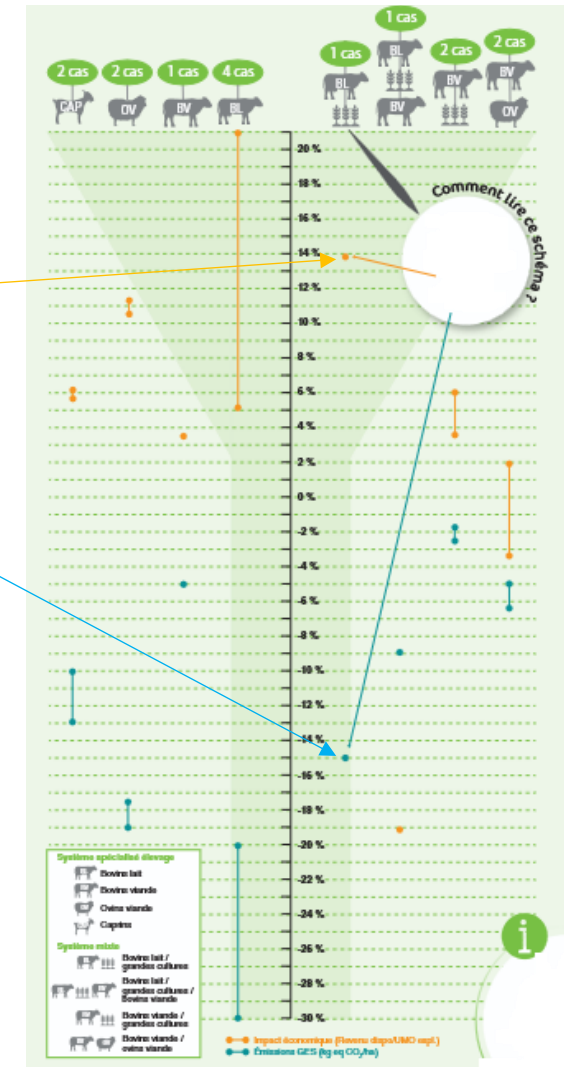


Comparison between S0 vs S2: Environmental and economic impact



For the dairy and arable system, the comparison between S0 and S2 shows an **economic impact of +14%** and an **environmental impact of -15%**

- By looking ahead to the climate of tomorrow, when the frequency of risks will be higher, taking proactive measures by changing practices to adapt one's system makes it possible both to reduce greenhouse gas emissions and to minimise the economic impact of these risks.



To conclude, INOSYS...

- It is a dynamic, multifunctional infrastructure that is essential for understanding systems, simulating transitions, and equipping stakeholders.
- INOSYS can also support on climate adaptation, feed autonomy, economic resilience, farm succession, labour organisation...
- More than a farm monitoring network, INOSYS has become a national living laboratory that transforms field observations into robust simulation tools, supporting research, advisory services and public policies for the transition of livestock farming systems.



Thank you for your attention

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