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RÉPUBLIQUE FRANÇAISE

MINISTÈRE
DE L'AGRICULTURE
ET DE
L'ALIMENTATION



Soil health practices : common ground on experience and knowledge

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Example of France

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Ministry of Agriculture and Food

Introduction :

- Good soil health is at the core of agriculture and environmental policies, and more !
- Public policies success depends directly or indirectly on effective soil management both quantitatively and qualitatively (land use planning, agroecology, biodiversity, bioeconomy, energy transition, circular economy, food, water, health),
- Importance of having a national soil strategy while soil losses (soil sealing) and soil degradation (drought, floods, erosion, pollution) increase.

A focus on soil organic carbon with 4 per 1000

- Major role in soil fertility and prevention of its degradation
- Stabilise yields,
- Restore degraded soils structure,

=> productivity and food security

- Improve water retention capacity of soils,
- Limit sensitivity to erosion

=> adaptation to climate change and control of desertification

- Compensate GHG emissions

=> mitigation, carbone neutrality

Many tools available to improve soil sequestration in France



Common Agriculture Policy

**AGRICULTURES
PRODUISONS
AUTREMENT** PROJET
AGRO-ÉCOLOGIQUE
POUR LA FRANCE



The Agroecology Project



The National Low Carbon Strategy



Research

The contribution of **CAP** to soil carbon

- Direct or indirect effect of several Good agricultural and environmental conditions (GAEC) = cross-compliance to receive support paiements
- Greening of the CAP: features of ecological interest, maintenance of permanent grassland, crop diversification
- Agro and environmental measures (MAEC):
 - One « MAEC » dedicated to soils: reducing tillage, maintaining plant covers, diversifying crop rotation.
 - Measures to maintain and manage extensively areas under grass and pastures
- Support for the development of the organic sector. Development of organically managed land driven by the increase of organic food consumption.

The Agroecology project

- Systemic approach: to take advantage of the positive interactions and synergies at the level of the individual farm as well as in its relationship with the surrounding ecosystem, the region, the agri-food chain, etc.
- Reliance on positive interactions in the agricultural ecosystem => conservation and improvement of natural resources (soil, water, air) by efficient management of inputs, energy and crops
- Enhancement of biodiversity and biological regulations (agroecological infrastructures, diversification of crop rotation, association of crop species...)
- Enhancement of the economic performance of the farm
- Enhancement of farm autonomy: seek to complete bio- and geochemical cycles (carbon, water, nitrogen, etc.)

A public policy and a collective project

- A threefold public policy:
 - To make explicit an ambitious and mobilizing perspective for agriculture => to **produce more and better**
 - To organize a **collective governance** through a steering committee with the main stakeholders of the sector
 - To define and to implement a **collective and comprehensive action plan** (17 chapters; more than 70 actions; for each action: a pilot, a timetable, milestones and monitoring indicators)
- **Modification of the other policies** from this new perspective => change the supports to farmers to strengthen the incentive for agroecology, change the training, etc.

National plans in the agroecology project with direct impact on soil carbon

- Agroforestry plan with 5 axes: knowledge, training, advisory services and promotion, economic value of agroforestry production, international spread.
- Legumes plan: Nitrogen is a key factor to enhance organic matter going back to soil. This plan promote culture of legume and to limit mineral fertilizer use.
- Biogaz plan: digestate can be a substitute to mineral fertilizers.
- Teaching programs have been renewed in order to pay more attention to soil management.

GIEEs: economic and environmental interest groups

Voluntary groups of farmers organised around a shared project for improving or consolidating their farming methods in order to improve their economic, environmental and social performance

Recognition at the regional level following a call for proposal

More than 430 GIEEs granted recognition at the end of this year
(more than 6000 farmers)

Wide variety of types of production and partners (technical, research, etc...)



The National Low Carbon Strategy

It sets a roadmap to achieve the national mitigation targets in a middle and long term perspective

- **It includes recommendations on practices linked to soils:**
 - Diversification
 - Legumes
 - Permanent Pastures
 - Agroforestry
 - Soil cover
- **It also aims to reduce settlements on natural soils**

Research at national level

- One of the 4 priority of the national plan « Agriculture and Innovation 2025 » is focused on soils and on the link between agriculture and climate
- Creation of a national network of experts on soils
- Large scale experimentation of practices in a network of farms
- Great involvement of national research institutes with the agroecology project
- New campaign of measurements by the national soil quality measures network (RMQS)
- Study on-going on the evaluation of the soil carbon sequestration potential of practices in France (INRA-ADEME)
- CIRAD and IRD specifically focused on research in tropical areas.

Conclusion

- Science is at the beginning to give the robust bases for transition of practices and also of the policies supporting or incentivizing them = science based,
- Farmers are at the core of action: need to be convinced of the interest of transition in matter of economic and social performance, not only environmental = success stories and win-win examples,
- Long term perspective = keep practices on the long run,
- Economical evaluation of the technical solutions is important,
- Science can also help reduce uncertainties between measurement and carbon stocks monitoring.