

Monitoring farms committed to an agroecological charter: control, activities' reporting and assessments of impact and sustainability

Élise Dupouy

▶ To cite this version:

Élise Dupouy. Monitoring farms committed to an agroecological charter: control, activities' reporting and assessments of impact and sustainability. Life Sciences [q-bio]. 2024. dumas-04770070

HAL Id: dumas-04770070 https://dumas.ccsd.cnrs.fr/dumas-04770070v1

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L'Institut Agro Rennes-Angers



Année universitaire : 2023-2024

Spécialité :

Agroecology

Mémoire de fin d'études

⊠ d'ingénieur de l'Institut Agro Rennes-Angers (Institut national d'enseignement supérieur pour l'agriculture, l'alimentation et l'environnement)

□ de master de l'Institut Agro Rennes-Angers (Institut national d'enseignement supérieur pour l'agriculture, l'alimentation et l'environnement)

□ de l'Institut Agro Montpellier (étudiant arrivé en M2)

□ d'un autre établissement (étudiant arrivé en M2)

Monitoring farms committed to an agroecological charter: control, activities' reporting and assessments of impact and sustainability

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Soutenu à Rennes le 19/08/2024

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Acknowledgment

I would like to express my gratitude to all those who have supported me throughout the journey of this internship and the redaction of the following thesis.

First and foremost, I am very grateful to my thesis advisor, Simon Bestel, co-founder of FEVE, for his guidance, support and confidence. Our numerous talks, his expertise and experience were essential in shaping this work. I also want to thank him for his availability, making me feel comfortable within FEVE's team and legitimate to complete the given task with a lot of freedom.

I would like to acknowledge my coworkers from FEVE for their reception and support. Their numerous personal and work commitments are inspiring and lead to interesting conversations. A special thanks to the team of project managers who quickly included me and brought me on farm trips to show me their job and the fulfilment of FEVE mission.

I also wish to extend sincere thanks to my professors at l'Institut Agro, whose teachings and insights have significantly contributed to my academic growth. I especially want to warmly thank Catherine Darrot, lecturer and researcher at l'Institut Agro and my internship tutor, for her availability, understanding and precious advice for the redaction of this thesis.

Last but not least, a special mention goes to my family and friends, who helped me through this period and supported me during the internship and the redaction of this thesis.

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| Abbreviation | Definition |
|--------------|---|
| САР | Common Agricultural Policies |
| CEC | Cation Exchange Capacity |
| CSR | Corporate Social Responsibility |
| FEVE | Fermes En ViE |
| GOS | Gross Operating Structure |
| GSP | Gross Standard Production |
| HVE | High Environnemental Value |
| ICPE | Installation Classified for the Protection of the Environment |
| ICS | Internal Control System |
| MCA | Multi Criteria Analysis |
| PGS | Participatory Guarantee System |
| TPC | Third-party certification |

List of abbreviations

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Introduction

One of the main stakes of French farming is the renewing of farmers. In 2020, French farmers medium age is 51,4 years old. Nowadays; for three farmers who leave their farms, only one new farmer is established (Chambres d'agriculture France, 2024). Meanwhile, farms are getting bigger, because their number keep reducing but the total farmed area is still the same. In 50 years, farms' size has increased by 50 hectares on average (Girard, 2024). The farms that need to be transmitted are specialised, large and financially out of reach. Therefore, loans to acquire a farm are hard to get for farmers who don't come from a family of farmer.

It is by noticing this issue that FEVE have been created in 2020. It is an ESUS¹accredited company that facilitates the establishment of new farmers thanks to citizens savings combined in a landholding trust. To do so, FEVE uses the landholding trust to acquire farms (land and properties) and rent it to someone who wants to establish himself. The second tool of FEVE is its agroecological charter (Appendix 1) that the farmers have to agree on and sign when they become tenants of the farm. The charter is a guarantee to the citizens who want to put money into the agroecological transition of French farming.

Twenty-five farms have been established since the beginning of FEVE and they estimate the establishment of more than twenty new farms per year. For now, once the farmers are established, if nothing special is needed (construction works, new land investments, solicitation of FEVE community...), contact could be limited. It has not yet been the case because of the low number of farms established, their recent establishment and the need for FEVE to gather their feedback and opinion on several question and mobilize them for communication purposes. Because of the increase in the number of established farms and the fact that some will be established for few years (so require less frequent contact with FEVE), having a proper process to monitor them and assess their sustainability seems important. The mission is to set up a process for the farms after their establishment and, if possible, apply it to the existing farms. For FEVE, the use of the monitoring process is plural:

- Support FEVE's team: The tool should provide valuable insights into farm operations, helping the team to track the evolution of each farm. It should highlight any areas requiring immediate attention and intervention.
- Investors reporting: The tool must facilitate clear and compelling feedback to the investors. It should enable FEVE to effectively communicate about the tangible outcomes of their investments by presenting the impact and evolution of the farms.
- FEVE's farmers acceptance and use: The tool should be designed with the farmers' needs in mind. First ensure that it is beneficial and help them for the farm management and decision taking. The monitoring process have to be understood, accepted and agreed by the farmers. The objective is not to add constraints and tasks that they don't feel comfortable with.

To assess the need and the method that can be implemented, first we will study the importance of farming systems' sustainability and how to assess it.

During this thesis, the citizens who invested in FEVE landholding trust will be named investors and the farmers that are established on land acquired by FEVE will be designated as FEVE's farmers.

¹ ESUS = « Entreprise solidaire d'Utilité Sociale ». It means a Firm of social and solidarity use.



Figure 1 : Sustainable development GOALS, (United Nations, 2015)

Chapter 1: State of the art

1. Several ways to define, measure and conceive the sustainability of a farming system

1.1. How to define sustainability?

The first mention of the multi-functionality of agriculture and the introduction of the concept of sustainable development occurred during the Rio 1992 Earth Summit (Rossing et al., 2007). In 1993, the concept of sustainable agriculture was getting popular. It was used to define an "environmentally sound, productive, economically viable, and socially desirable agriculture" (Schaller, 1993). Nowadays, the concept has evolved, and productivity is no longer the second criterion cited when it comes to giving a definition of sustainable agriculture. The United Nations defined sustainable development goals, as illustrated in the Figure 1.

Agroecology is defined as "the integration of research, education, action and change that brings sustainability to all parts of the food system: ecological, economic, and social. It's transdisciplinary in that it values all forms of knowledge and experience in food system change. It's participatory in that it requires the involvement of all stakeholders from the farm to the table and everyone in between. And it is action-oriented because it confronts the economic and political power structures of the current industrial food system with alternative social structures and policy action. The approach is grounded in ecological thinking where a holistic, systemslevel understanding of food system sustainability is required."(Gliessman, 2018).

The definition is quite broad, and its perception and application within the farm can be different according to the context (Cheyns, 2011; Bathaei and Štreimikienė, 2023). As it is mentinoed in the previous definition, there is a consensus to say that there are three stakes to sustainable farming: economics, social and environmental (Bathaei and Štreimikienė, 2023). But then, the main disagreements concern the detailed criteria that would be used to describe a sustainable production (Cheyns, 2011). They may differ according to personal convictions; they are usually split in two groups believing in two different concepts: strong sustainability and weak sustainability. A weak sustainability is the actual dominant feature (Valiorgue, 2023). In broad terms, it is usually defined as an agriculture that makes compromises between environmental, social and economics stakes that can be contradictory (Valiorgue, 2023). On another hand, a strong sustainability doesn't make compromises between environmental, social and economic stakes. Indeed, it is considered that resources can't be substitute by financial resources. Organic farming is considered the most widespread system of strong agroecology in Europe (Valiorgue, 2023). It is impossible to give one definition and road map of what sustainability is that makes a consensus; different conceptions exist and coexist.

1.2. The importance of assessing sustainability: a major concern in French farming and a central piece of public policies

In 2023, a survey measured that 60% of the French population believes that it is urgent to act for the future of the planet and 76% are worried about the impact of the environment on their health (GreenFlex, 2023). This concern causes changes in daily choices of consumers who modify some of their habits to reduce the impact of their purchases. When it comes to agriculture, most of the consumers are worried about the impact of "pesticides on the environment, soil quality, water and biodiversity" (GreenFlex, 2023) and want to consume products that have the lowest impact on the environment.

Table 1: GOS and subsidies of French farms, depending on their economic dimension, 2021

| Size of the structure | GOS | Farms subsidies |
|------------------------------|--------|-----------------|
| Small farm (GSP<100 000€) | 39.20 | 26.53 |
| Medium farm | 86.33 | 36.18 |
| Large farm (GSP>250 000€) | 180.81 | 49.40 |
| Total | 92.42 | 35.94 |

Value in thousands of euros

Source : Agreste, RICA 2021 (INSEE, 2021)





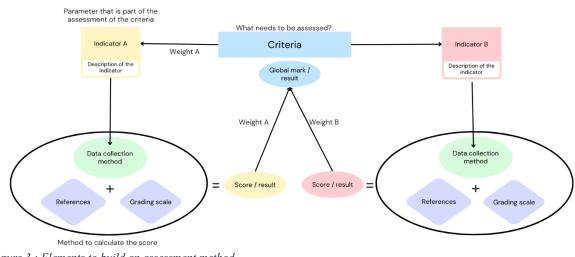


Figure 3 : Elements to build an assessment method

To fit with the global trend and achieve a sustainable production in Europe, farmers need to be encouraged and supported. One of the most obvious levers is public policies that can encourage a shift in farmers' practices. Public policy is defined as "a system of laws, regulatory measures, courses of action, and funding priorities concerning a given topic promulgated by a governmental entity or its representatives" (G. Kilpatrick, 2024). It is known that French farmers significantly rely on the CAP (Common Agricultural Policies) subsidies to maintain their activity.

According to the Table 1, French farms' GOS relies on subsidies. They mainly come from the CAP; therefore, it is a European public tool that can encourage farmers to implement more sustainable practices. Each country can decide of its own strategic plan to allocate the budget. In 2023, national plans have been implanted for the 2023 to 2027 period. The French plan aims to support the agroecological transition (Remongin, 2024) through green payments². They were introduced in 2015 and can be added to the other subsidies that farmer gets if they respect three rules (having a certain amount of permanent pastures, of diversified crops and enough ecological interest surfaces) (Mesnel, 2018; Remongin, 2022). Those subsidies are disconnected from the type of production of the farm, and they go directly to the farmers to encourage and reward specific actions in favour of the environment. In France, this green payment represents 30% of the direct subsidies (more than 2 billion euros per year). Financially supporting practices that are good for the environment helps market the positive externalities of those practices (biodiversity, soil health etc) (Mesnel, 2018).

Supporting farmers in their shift of practices, through the allocation of subsidies, is a first lever to the agroecological transition. Another lever is to identify individuals with strong agroecological convictions who want to start or extend a farming activity and help them. It is especially accurate now, with a new generation of farmers that seems to be more sensitive to agroecological concepts and tend to establish more organic farms than their elders. For example, in Nouvelle-Aquitaine, 40% of the farms recently established by young farmers (below 40 years old) are organic (Chambre d'agriculture de Nouvelle-Aquitaine, 2022). As a comparison, only 14.1% of the farms are certified organic in the same region (Agence Bio, 2024).

Therefore, being able to assess farm's sustainability or measure some of the performances on this domain, could be a central tool to public policies implementations.

1.3. Several methodologies exist to assess the sustainability of farming systems

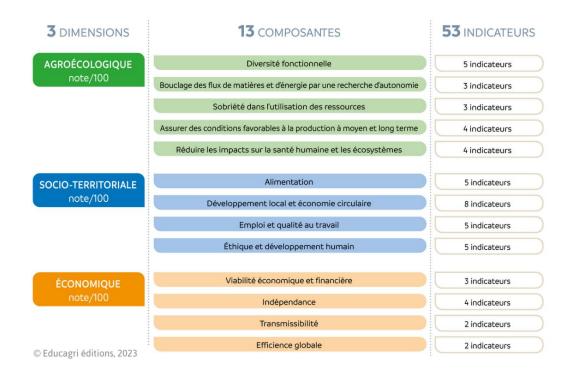
1.3.1. What is an assessment?

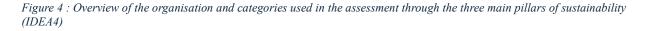
An assessment is defined as "the act of judging or deciding the amount, value, quality or importance of something, or the judgement or decision that is made" (Cambridge Dictionary, 2024a). Some synonyms are appraisal and evaluation. Assessing (or evaluating) means that something is being measured to provide information about a criterion (indicator), it can be qualitative or quantitative (cognitive dimension). To measure a performance, the ideal indicator is SMART (Figure 2) : specific, measurable, achievable, relevant and time-bound (Bezes et al., 2016). Then, the result of the measure must be compared to a reference. It is the ideal result and a scale to determine how good or bad the result is compared to the reference value (normative dimension). Therefore, the cognitive dimension is objective whereas the normative dimension is about choices and defined objectives.

² i.e. "Paiments verts"

Table 2: Comparison of 5 assessment methods of environmental sustainability in France (according to (Galan et al., 2007)

| | IDEA4 | DIAGE | DIALECTE | DIALOGU E | INDIGO |
|-------------------------------|--|---|--|--|---|
| Scale of the evaluation | Farm | Farm | Farm | Field & Farm | Field & Farm |
| Implementation time (days) | 1 | 1.5 | 1.5 | 2 | 2 |
| Designed for a use by farmers | Yes | Yes | Yes | Yes | No |
| What is evaluated? | Sustainability on 3 pillars: Agro-ecology / Socio- territory / Economic | The environmental impacts of the activities of the farm | The impact of the farming system on the environment | Similar to DIALECTE but with more field level measureme nt | Field-scale impact of production systems & overall farm impact on the environment |
| Type of agroecology | Strong | Weak | Weak | Weak | Weak |
| Type of assessment | Quantitative and qualitative | Quantitative | Quantitative | Quantitative | Quantitative |





To sum up, several items are needed to evaluate: a criterion, its related indicators, their descriptions, a method to measure them, references and a grading scale (Figure 3).

1.3.2. The existing methodologies to assess farms' sustainability

A farming system is complex, and many parameters need to be considered to understand the globality of the system. Several methodologies to assess the sustainability of a farming system exist. The focus will be on French methods because they are the ones that might fit the best French farms typologies.

These methods have been developed by several institutes and some of them are available for general use. They are called multi-criteria analysis (MCAs). Each methodology defines its indicators, their description, the measurement method, the reference value and a grading scale. MCA have been an active research field since the 1970's (Nijkamp, 1975) and many tools and indicators have been developed from 1990 to now on. In 2002, 12 indicator-based methods existed already (Van Der Werf and Petit, 2002). In France, the five most used methods are:

- IDEA (« Indicateurs de Durabilité des Exploitations Agricoles »³) developed by the French Ministry of Agriculture
- DIAGE (« DIAgnostic Global d'Exploitation »⁴) developed by the Federation of Agricultural Cooperatives
- DIALECTE (« DIAgnostic Liant Environnement et Contrat de Transition Ecologique »⁵) developed by Solagro
- DIALOGUE (« Diagnostic agri-environnemental global d'exploitation » ⁶) developed by Solagro
- INDIGO (« indicateurs de diagnostic global à la parcelle »⁷) developed by the INRA

Those methods differ on their general characteristics, detailed in the Table 2 (Galan et al., 2007; Bockstaller et al., 2009).

The IDEA4 method is the only one that is based on a strong agroecology. Indeed, it seems like it is the only one whose criteria are assessing the farm sustainability on the spectrum of a strong agroecology (as defined in the section 1.1). Moreover, it is often refreshed and adapted to the new knowledges and identified stakes. IDEA4 now includes 53 indicators (Figure 4) and it is based on five properties of a sustainable farm : productive and reproductive capacity for goods and services, global responsibility, local attachment, sturdiness and autonomy (IDEA4).

³ i.e. Farm's sustainability indicators. In 2013, the method has been reviewed to be adapted to the actual context and objectives of the French agriculture ministry. The actual version id the 4th.

⁴ i.e. Farms global diagnosis

⁵ i.e. Diagnosis binding environment and ecological transition contract

⁶ i.e. global farm's agro-environmental diagnosis

⁷ i.e. indicators for aglobal diagnosis at the plot scale

2. The quality of a guarantee is correlated to the reliability of the control

2.1. What is a control?

To control is to order, limit or rule something or someone's actions or behaviour (Cambridge Dictionary). Performing a control refers to the action of controlling something and/or someone and checking their situation considering a norm (Larousse).

Controls are present in many fields of society, they come from the implementation of norms (Baudinet and Perez, 2017). Norms are conventional constraints; they aim at promulgating conditions and targeting a result. A norm is based on the auto-constraint that individuals are applying to themselves. It acts as a convention, meaning it is accepted, internalised and applied by individuals. However, in a case where the norm becomes an external constraint, perceived by the individual as coming from something else, it becomes an obligation and needs to be controlled by another entity (in (Baudinet and Perez, 2017) from (Durrive and Daniellou, 2015)). So, control appears in the society when the norm is a constraint and is not a tacit agreement between the individual and the society (Baudinet and Perez, 2017). Indeed, states and operator's control are useful to check if the regulations are respected and legitimate any added-value.

Agriculture is subject to numerous controls due to several key factors. First, health risks related to food safety require strict monitoring to ensure that agricultural products are safe for consumers. Then, compliance with standards is often essential to access subsidies, which motivates farmers to adhere to specific criteria. Finally, controls play a crucial role in communication, marketing, and product promotion. They reassure consumers about product quality and traceability, while also enhancing the reputation of producers. The modalities of these controls can be very different according to its aim and the available tools. Controls can be administrative or on field controls, mandatory or not, done by the administration or other institutions and planned or not (Massat et al., 2015; Baudinet and Perez, 2017).

In the following sections, controls will be examined through two lenses: public regulations and certification processes. The charter can be associated with both public regulations and certification requirements. The processes implemented in this context can serve as a source of inspiration and learning. Moreover, FEVE farmers are systematically subject to both types of controls: all farmers must comply with public regulations, and FEVE farmers are required to be certified organic. Understanding these processes is useful for aligning FEVE's monitoring practices with them.

2.2. Respect of public regulations

Every French farm may have to go through controls that check on the regulations and laws. Those controls are not chosen, they are inherent to the position of being a farmer in France and having to comply with the rules of the country.

2.2.1. Regulations and criteria for subsidies

If a broader view is taken, rules in the agricultural sector may be beneficial to the society, when they are based on the interests of the greatest number of people. They ensure that farmers' practices, products and services are in adequation with the collective interests of the population.

The major subsidy for farmers comes from the CAP. It represents 38% of the European budget and 42.9% of French farms revenues (Mesnel, 2018). For any aid that a farmer can

receive, he must respect a set of rules called GAEC. These rules condition any other payments, this is known as the CAP conditionality (Xicluna, 2023). It has existed since 2003 but has been reinforced in the new CAP (2023-2027) in terms of environmental requirements through the green payments (Appendix 3). This combination of payments and rules is a great source of innovation, as it was observed with the nitrate directive. The obligation of implementing nitrate traps within mid-range cultures helped farmers discover the interests of intercrops (Petit, 2013). But sometimes, these rules can be too normative, and their interest is limited. For example, the GAEC rules are checked at the scale of the farm. But, to see a significant increase in the biodiversity, those measures need to be applied at the ecosystem scale. Therefore, it seems impossible to condition farms' subsidies to one another (Mesnel, 2018). So, the subsidies are distributed according to the practices, not the results.

Technically, it is not mandatory for a farmer to comply to the CAP rules. But it seems illusory to think that they could keep going the exact same way with their activity without those subsidies (Table 1; Mesnel, 2018).

2.2.2. Public controls

2.2.2.1. The goal of the controls...

To make sure that the regulations are respected, controls are being set up. This imbrication is useful to make sure that different stakeholders change their activities and behaviours towards better practices or encourage them to keep going when they already implemented those practices (Mesnel, 2018). Two contexts of public controls coexist.

- First, the regulation is a basis that all farmers have to respect.
- Then, they can get additional subsidies by respecting specific norms. It is how the CAP operates.

In both cases, it is assumed that farmers respect the norms they are engaged with. Controls are settled to make sure that it is accurate. If it is not, the consequences are defined according to the code of penal procedures. The author of a violation of the penal code is handled by the judicial police (Massat et al., 2015). In the case of the CAP, if a farmer or his farm are not conforming to the norms, an alert without financial sanctions can be given. According to the seriousness, repetition and extent of the fault, the subsidies that they are supposed to get can be reduced (from 3% or more) (Xicluna, 2023).

Controls enable to check on the respect of a rule and apply a sanction when required. It is a lever to encourage the respect of norms and guarantee to the citizens and consumers that the government politics are being applied.

2.2.2.1. ...their course and...

There are two main tracking alternatives that can be controlled to check the same norm: the declarations and administrative documents related to the norm or going on field to see indications of the respect or not of a norm. Those two approaches can be part of the same process.

Most of the controls are mainly administrative, a farmer whose declarations don't fit the regulations can be sanctioned. Inspectors and farmers mainly go through the declarative documents without going on field: they will check if the amendment book is correctly filled but won't check on field if the declaration fits the reality of the practices (Petit, 2013). It means that farmers (and their advisers (Compagnone et al., 2015)) spend a significant amount of time working on administrative declarations. For example, within the CAP process, if something is not fitting the expectations, or if the farmer is randomly selected during the first administrative control, a control on farm and on field is realised.

To make sure that the control process is efficient, each state is inspected at the European level and the efficiency of their control system is judged (Baudinet and Perez, 2017).

2.2.2.2. ... the auditors.

There are two main stakeholders during a control: the one being controlled and the one controlling. In the study case, farmer is being controlled by an auditor (or inspector).

As an example, the payment of the CAP depends on a 'paying organism'. In France, the ASP⁸ is qualified by French public authorities. The controls are under their responsibility. Then, they delegate the administrative controls (first layer of control) to another structure, the DDT⁹which is a public regional service. Field controls (second layer) are handled by the ASP. In the case of the CAP, the first layer of control is declarative (managed by the DDT). Farmers have to give several information and provide supporting documents. Amongst the farms that are right on course, random deeper controls are operated by the DDT. When inconsistencies are discovered, the ASP is notified and decides if a control on site is needed. The controller on site is not only making field observations, but also has to verify if mandatory administrative documents exist and are conform (Massat et al., 2015). This process is useful to check on the accuracy of the declarative work of farmers and make sure that the process to deliver subsidies is performant enough to uncover mistakes and infractions (Massat et al., 2015). Thereby, the CAP controls in France are not systematics and not necessarily announced. The inspector can inform the farmer 48 hours before so he has time to gather all the documents needed and the control gets easier and faster (Massat et al., 2015; Baudinet and Perez, 2017).

Amongst controllers, there are three perceptions of the regulations and behaviour associated (Petit, 2013):

- Some of the controllers will follow the same course and won't change the processus of control and the criteria even if it is not relevant on the farm (Petit, 2013). The law can't plan the diversity and complexity of all the situations. In this type of functioning, the relation between the farmer and the inspector is tinted with distrust
- Some inspectors are conscious that the norm can't fit perfectly each case. They try to set up a pragmatic agreement with the farmer by trying to fit the reality of the agricultural practices with the fixed norms (Petit, 2013) and trusting each other.
- The last ones perceive when the norm is incompatible with the reality and no agreement or mitigation of the situation can be found. Some inspectors cover up farmers infractions (Petit, 2013) when they think that the farmer couldn't get to the norm.

According to the controller and his behaviour, a farmer can be more or less disposed to the realisation of the control. It may sustainably change his perception of the control.

2.3. Certification: a voluntary regulation

As detailed before, farmers must comply with public laws and regulations. Voluntarily, they may also engage themselves in additional programs, as certifications. But being certified bring about rights and duties that are detailed above.

⁸ ASP = Agence de Services et Paiements i.e. *Payments and services agency*

⁹ DDT = Direction Départementale des Territoires i.e. *Departamental Territories Direction*

2.3.1. Certification, added value and functioning

The Business English Cambridge dictionary defines certification as "the process of giving official or legal approval to a person, company, product, etc. that has reached a particular standard" (Cambridge Dictionary, 2024b). Voluntary standards (or norms) are becoming common in several sectors (management, industrial activities, technologies, etc.) and can be associated to a certification (Fouilleux and Loconto, 2017). In the French rural code, agricultural certifications are defined as the attestation that a food product or an agricultural product (processed or unprocessed) meets a set of qualities and characteristics previously defined in the product specifications, which establish a superior level of quality¹⁰ (Code rural, 1998). Those standards can be public or private (Fouilleux and Loconto, 2017) but in a general context of liberalisation, the major ones tend to become private (Fouilleux, 2012).

A certification is a multi-stakeholders process and requires several layers to function (Fouilleux and Loconto, 2017). First, a list of specifications from the farm to the commercialisation needs to be defined. Then, these specifications are adopted by the producers and the downstream chain. Finally, the product and the production practices are controlled to make sure that they meet the specifications (Fouilleux, 2012). This control and its course will be detailed in the next section. If the result of the certification is good, a label can be applied to the product. The consumer knows more about the product and its quality thanks to this process.

In France, quality signs targeting food products are numerous and can be very different or quite similar from one another. According to the trust of the consumer and the reputation of a label, the consumer's willingness to pay for a product can vary according to the quality of the product. Most of the labels highlight practices that are qualified as sustainable but with different approaches. It can be more focused on people's working conditions, the impact on the environment, on the biodiversity, on the territory, on supporting local and traditional productions etc. Labels can be associated on a same product to demonstrate its qualities from several angles.

2.3.2. The variety of private controls associated to the certification

As explained in the previous section, a pillar of the certification process is the control. Different logics and modalities exist to guarantee and attribute labels (Lemeilleur and Allaire, 2018). This diversity can be illustrated with the different processes that exist amongst the Organic Movement (Lemeilleur and Allaire, 2018; IFOAM, 2024a). According to the country, different certification systems exist. They can be declined in three main categories:

- Third-part certification, where the control of the norms and the certification are done by a private independent company. Beforehand, to be able to deliver certifications, this private company is certified by an independent accreditation body.
- Participatory Guarantee System. They aim to "certify producers based on active participation of stakeholders and are built on a foundation of trust social networks and knowledge exchange" (IFOAM, 2024b).

¹⁰ Extrait de l'article L643-2 du Code Rural : « Les labels agricoles attestent qu'une denrée alimentaire ou qu'un produit agricole non alimentaire et non transformé possède un ensemble distinct de qualités et caractéristiques spécifiques préalablement fixées dans un cahier des charges et établissant un niveau de qualité supérieure. »

| | | Santé | Environnement / bien-être animal | Origine O | Mode de production/culture | Ethique | Qualité gustative |
|--|---------------------------|-------|-------------------------------------|--------------|-------------------------------|---------|----------------------|
| Bleu, blanc, cœur | BLEV | ~ | ~ | | | | |
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| Bio cohérence | Bio | ~ | ~ | | | ~ | |
| Nature & progrès | NATURE | ~ | × | | ~ | ~ | |
| Rainforest alliance | | | ~ | | | ~ | |
| Appellation d'Origine Contrôlée | AC | | | ~ | ~ | | ~ |
| Appellation d'Origine Protégée | ۲ | | | ~ | ~ | | ~ |
| Label rouge | the Res | | | | | | ~ |
| Spécialité Traditionnelle Garantie | | | | | ~ | | |
| Certificat de conformité | | | | | ~ | | |
| Producteurs paysans | | | ~ | | | ~ | |
| Viandes de France | VIANDES | | ~ | ~ | | | |
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Figure 5 : Guarantees and objectives of French labels from (ParisTech, 2019)

Internal Control System is a combination between TPC and PGS, where groups of farmers can be controlled and certified as a group, by a private and independent certifier. The organic label was defined and carried on by private groups of producers associated to engaged consumers. It was based on trust between the different producers and the consumers. Farmers were controlling one another. In 1981, French public regulations started supervising the organic certification; Europe did the same in 1992. Public regulations have been established and the control system changed with the introduction of independent auditors (Fouilleux, 2012). At the international level, IFOAM is the organism in charge of identifying national labels that can be part of the international organic label. Those three different systems (TPC, PGS and ICS) are represented within the IFOAM.

2.3.2.1. Third-Part Certification

In the case of organic farming in developed countries, an important increase in commercial flux and the diffusion of organic products in supermarkets (and not only in specialised shops) was recorded (Fouilleux, 2012). It was due to the general liberal context and the importance given to sustainability stakes. In this context and with the multiplication of voluntary private norms (Figure 5) the main control process became the TPC, where an auditor is sent to check that the practices on the farm are conform to the labels' specifications. This change in the process led to the affirmation of norms and market-oriented practices that can be controlled without bias (Fouilleux, 2012). This functioning and normalisation have become the ideal certification processus. It led to a phenomenon of privatisation of norms (Lemeilleur and Allaire, 2018) and the use of independent auditors is being systemized. The quality of the controls are now the guarantee of the label credibility (Fouilleux and Loconto, 2017).

The development of a certification based on a TPC link together several stakeholders. Those labels depends on four markets : the certified products market, the standard market, the certification services market and the accreditor services market (Fouilleux and Loconto, 2017). The two first ones are inherent to the development of a certification. Markets for certification and accreditation services are co-dependant and may have a strong influence on a label development and functioning. Another characteristic of this type of certification is the cost. Private certification stakeholders function because of the certification fees that has to be paid by the farmer who wants to be certified. Those fees include the certifier services and the cost for the certifier organism to get the accreditation from the accreditor organism. But this high cost excludes some of the producers who can't afford the certification (Fouilleux, 2012; Prévost, 2020).. Moreover, those private certification organisms are getting paid according to the amount of certification that are done and the time needed.

In underdeveloped countries, the IFOAM recognize non-TCP certifications. Those certifications are participative and shows great results, it is called Participatory Guarantee system (PGS). The IFOAM is trying to drive developed countries into considering those alternative modes of certifications (IFOAM, 2024b).

2.3.2.2. Participatory Guarantee System

The impact of globalisation on productions and commercialisation raised concerns to some organic farmers communities in which not every individual had to access to a TPC. To stand out, they decided to create norms and references that are now qualified as organic farming movements (Lemeilleur and Allaire, 2018). Those communities are based on trust, social networks and knowledge exchange (FIBL and IFOAM, 2022), indeed active stakeholders are not only farmers, but also doctors, consumers, agronomists, etc. Most of those movements have similar

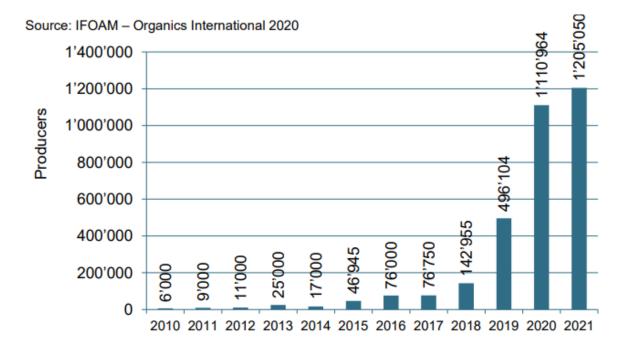


Figure 6 : Development of PGS-certified producers worldwide

organisations and agree on the main principles of sustainable farming (health, ecology, fairness and care (FIBL and IFOAM, 2022)).

More concretely, PGS systems enable the direct participation of different stakeholders to the development of the label by choosing and defining the standards together, developing and implementing certification procedures and taking certification decisions. This participatory model is what makes PGS different to TPC. Certifiers in a PGS system are voluntary, which makes certification free for producers and ensures that those involved in the label's functioning goes on farms and are familiar with their practical issues. Moreover, it allows for a high level of communication within groups members and the creation of a network (Lemeilleur and Allaire, 2018; Prévost, 2020; Dorville, 2021; IFOAM, 2024b). Voluntary participation is also required to define norms, standards and make them evolve through strong bottom-up systems (Dorville, 2021).

The French label called *Nature & Progrès* was the organic label of reference in France with a PGS system, but it changed in 1995 because public policies decided that the organic certifications would be controlled by a third-party institution. Nowadays, their federal body is constituted of local members and the norms are not always written. Indeed, rules, controls, norms can differ from a group to another, and from a stakeholder to another. It makes intricate conversations between the different communities (Dorville, 2021).

IFOAM is a leader of the PGS concept. They officially supports the development of PGS and "advocates for the recognition of PGS by governments" to acknowledge the presence and the production of farmers that can't afford a third-party certification process (IFOAM, 2024b). There has been an increase in the number of producers that are certified organic through PGS systems (Figure 6). This trend is accurate everywhere except in Europe and North America where the amount of PGS certification is stable (FIBL and IFOAM, 2022). The lack of recognition from European public institutions stops PGS certified producers to be entitle to public subvention, which limits the scope of PGS (Lemeilleur and Allaire, 2018).

The main limitations of PGS include:

- The lack of universal methodologies. PGS certification can describe very different functioning (Dorville, 2021; FIBL and IFOAM, 2022).
- Because of this, it is not recognised and used in developed countries (Fouilleux and Loconto, 2017; Prévost, 2020; Dorville, 2021).
- Within a same label: the interpretation of the norms, the method of control and the sanctions can be very different according to the local group and the persons (Dorville, 2021).
- It rests on volunteering and collective choices are not accessible to everyone if the group size is important. (Cheyns, 2011; Fouilleux, 2012).
- The respect of collective conventions is essential for the long-term image of the group. Some conflicts between individual with their own short term interests versus collective long term interests may happen (Prévost, 2020).

2.3.2.3. Internal Control System

Internal Control System is the third control methodology that is being promoted by the IFOAM (Meinshausen et al., 2019; IFOAM). It is described as a group certification system that allows groups of smallholders to access a third-party certification: "An Internal Control System (ICS) [...] allows an external certification body to delegate the periodic inspection of individual group members to an identified body or unit within the certified operator. This means that the

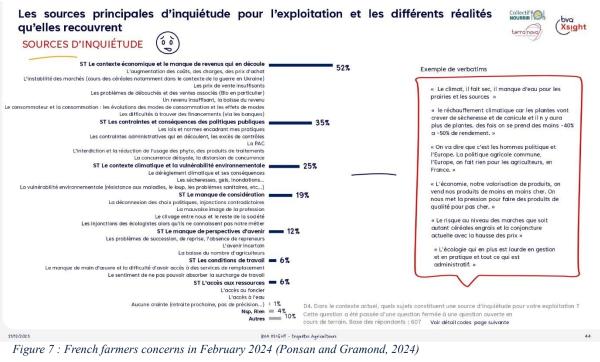


Figure 7 : French farmers concerns in February 2024 (Ponsan and Gramond, 2024)

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Figure 8 : List of public farm controls in France and their modalities (Massat et al., 2015)¹¹

¹¹ In "Type d'échantillonnage" (i.e. Type of sampling): "AI" refers to Aléatoire (i.e. Random) / "AR" refers to Analyse de risque (i.e. Risk analysis) / "OR" refers to Orienté (i.e. Oriented)

third-party certification bodies only have to inspect the well-functioning of the system, as well as to perform a few spot-check re-inspections of individual smallholders." (IFOAM). Very few studies exist on this approach even if it is an important system for smallholders who can afford an ICS certification but not a TPC. ICS certifications are recognized by the international markets, it means that smallholders products certified through ICS can be sold on the market as organic (Meinshausen et al., 2019).

Several systems exist and presents advantages and inconveniences. TPC system is more rigorous and stricter than the other ones. ICS allows farmers to have access to the same markets and controls than TPC but is dependent on voluntary persons and their motivations. PGS certification is included in a wider philosophy. It is less normative and look at the coherence of the whole farm instead of checking on specific indicators that don't always make sense. It is also based on people's demands and expectations but is dependent on volunteer who can take care of the controls on the farms. The regulations are less normative and leave space to personal's interpretation. It doesn't fit the international market requirements.

3. Space taken by controls and assessments in a farmer's activity

3.1. Controls and associated administrative tasks are integrated in the farm functioning

In 2024, in France, the agricultural sector faced a massive crisis that led to important protests. It started in January 2024, in Europe. French farmers were protesting due to the difficulties caused by the multiplication of extreme climate events, the rise of production costs and the market consequences of the war in Ukraine (Figure 7). In some European countries, protests targeted the new CAP subsidy rules. The environmental rules and green payments were considered too strict and unfair compared to those in non-European countries.

In France, the CAP represents 40% of the controls that a farmer will go through. As detailed before, it starts with an administrative control and can be followed by controls on farm. French authorities also visit farms to examine some authorization requests (ICPE¹²)(Massat et al., 2015). All these visits (Figure 8) are a burden to farmers : they must devote their attention and time to the inspecting agent and are placed in a vulnerable position as they are the ones being controlled (Massat et al., 2015). Moreover, regulations are becoming increasingly numerous and require a high level of knowledge. Most farmers don't have time to learn everything and may feel uncomfortable in front of the inspector who is specialised in rules and laws.

The conclusion of a control is to determine if the farm complies with all of the rules he is subjected to, or not. If it is not the case, consequences can be very diverse.

3.2. Assessments are marginal

An assessment, as defined in the section 1.3.1, is very different from a control. It is useful to measure the performance of a farm on a scale but is not able to control the compliance of a farm according to rules and regulations.

Nowadays in Europe, assessments are mainly used to measure farm's sustainability. To do so, several methodologies exist but there is no consensus on the use of any of them. The diversity of references and performance systems complicate the evaluation of a system. Indeed,

¹² Installations Classées pour la Protection de l'Environnement i.e. classified areas for environmental protection

Table 3: Comparison of the control modalities of the CAP and the Organic certification (Massat et al., 2015; Agence Bio and INAO, 2023)

| Modality | Organic certification (Agence Bio and INAO, 2023) | CAP subsidies – 2 nd pillar (Massat et al., 2015) |
|-------------------------|--|---|
| Public control | No | Yes |
| Voluntary process | Yes | Yes |
| Organism in charge | Ecocert, CertiPAQ BIO, Bureau Veritas, CERTISUD, CERTIS, Bureau Alpes Contrôles, QUALISUD, OCACIA, Foodchain ID, Control Union Inspection France | ASP |
| Sampling of the control | One control per year per operator + some random controls | Random, Risk analysis and Oriented |
| Field control | Every year | Yes |
| Announced control | Not always | Yes, letter and phone call |
| Consequences | From product drop as conventional for the commercialisation to the cancellation of the organic certification | Penalties, cut in the subsidies |

Table 4: The components of Administrative Burden (Moynihan et al., 2014)

| Type of Cost | Application to Social Policy |
|---------------------|--|
| Learning costs | Citizens must learn about the program, whether they are eligible, the nature of benefits, and how to access services. |
| Psychological costs | Citizens face stigma of participating in an unpopular program, as well as the loss of autonomy and increase in stress arising. |
| Compliance costs | Citizens must complete applications and reenrollments, provide documentation of their standing, and avoid or respond to discretionary demands. |

some public institutions would like to use a recognized sustainability assessment to arbitrate their partners' choices with concrete reasons and transparency (Bezes et al., 2016). Quantifying sustainable performances with a dispositive that makes consensus and can be public has not yet been done (Bezes et al., 2016) and it seems hardly usable in agriculture because of the diversity of the performances systems (Carnoye and Petitimbert, 2023).

4. Farms control: several actors and methodologies

4.1. A large variety of controls

French farmers spend around 10 hours per week doing administrative tasks (Boiteau, 2016; Collet, 2023). As it shown before, those administrative declarations are necessary and became a main part of control processes. Each farmer has to go through some controls that can be defined and characterised by several parameters (Baudinet and Perez, 2017):

- Public or private controls (detailed in parts 2.2 & 2.3)
- Voluntary or not
- The organism in charge of the control operation
- Sampling of the controlled farms: random, risk analysis or oriented
- Whether it is a surprise control or not
- the consequences of the control
- the modalities (administrative or field checks)

Many controls may happen on the farms, especially if the farmer is involved in a voluntary certification system (2.3). The modalities of controls may differ a lot (Table 3).

4.1. French farmers' perception of the control and the associated tasks

4.1.1. Controls are perceived as an Administrative Burden

Blandine Mesnel conducted a survey among French farmers to study their individual experiences with red tape and their perception of it as an administrative burden (Mesnel, 2017). An administrative Burden is defined as an "individual's experience of policy implementation as onerous." It points "the costs that individuals experience in their interactions with the state" (Moynihan et al., 2014). Administrative burden is decline in three costs, detailed in the Table 4, that have to be considered separately.

4.1.1.1. Learning costs

In the agricultural sector, when we talk about learning costs, it refers to the research and learning that needs to be done to know the regulations and how to deal with them. Since 1992, CAP declarations require more and more administrative tasks and documentations, becoming a significant part of French farmers' job. In France, the norm is that farmers have to be able to do it themself (Mesnel, 2017) and their autonomy is highlighted (Mesnel, 2022). Around 43% of the files were submitted without any assistance and around 30% of the files were done by non-state stakeholders (Centre d'études et de prospective, 2022). Whereas, in Spain for example, it is normal for farmers to get help from non-state stakeholders to deal with subsidies applications. 96 entities are certified as able to take care of CAP subsidies and almost all Spanish farmers require those services (Centre d'études et de prospective, 2022; Mesnel, 2022). Compared to Spanish, French farmers spend a lot of time understanding the regulations in order to be a step ahead and try to monitor the new subsidies and know if they fit some of the criteria. Those mandatory administrative tasks can repel some of the farmers. It is associated to an academic task and can induce mental blocks (Mesnel, 2022).



Figure 9: Details about French farmers concerns in February 2024 (Ponsan and Gramond, 2024)

4.1.1.2. Compliance costs

As a farmer, compliance costs are the constraints that come out to fit the new regulations and rules. It goes from the time that needs be spent to fill in the farm register to the money spend in an upgrade to reach standards. To limit this cost, nowadays, farmer's advisors help them fitting the CAP regulations. Sometimes, fitting the CAP is preferred to a system that makes perfect sense and have positive impact on the sustainability of the activity, biodiversity, yield etc. Significant time with advisors is used to make sure that the farm fit within the norms and the framework of the regulations (Petit, 2013; Mesnel, 2018). Moreover, because declarations are considered as the accurate representation of the farm, farmers learn how to arrange their declarations. Although there is no guarantee that all declarations are entirely accurate, some specialised software notify farmers when their declaration don't fit perfectly and the data is easy to correct ex post (Petit, 2013; Mesnel, 2017).

In the Figure 7, it is shown that the second main worry amongst French farmers are the constraints and consequences of public policies¹³. Within those, they are worried about the administrative constraints that comes with public policies and the controls resulting from it¹⁴ (Figure 9).

4.1.1.3. Psychological costs

Farmer's psychological costs (also named symbolism costs) are the non-tangible costs. They can be very different according to individual sensitivities and perception of the controls.

French farmers mainly highlight that all those rules and controls are the evidence of a lack of confidence between farmers and the government and a stigmatisation of agriculture (Mesnel, 2017). Also, feelings of injustice and unfairness are highly represented when they talk about regulations (especially green regulations). Some farmers may view these regulations, norms, and declarations as more constraining and limiting for diversified farms compared to standardised ones, with higher compliance costs when the productions are the most diversified (Mesnel, 2022). The aim of green regulations is to encourage the improvement of farms that are behind society expectations and needs. To do so, green practices have to be objectified to become norms, but they are not relevant in all the contexts and territories. This is highly criticised (Mesnel, 2018) and can be very frustrating to farmers who adapt the regulations to their context. They are aware that they can be sanctioned if their declarations do not comply with the regulations (Mesnel, 2017; Mesnel, 2018).

Control itself is a source of stress for farmers. Not knowing if they will be controlled and when is quite stressful. Moreover, even if they do their best, they may always have a doubt about their conformity with the regulations. Meanwhile, the controller is an expert in the regulations that he comes to verify. They don't know if they understood it well, if there are some new norms that they have no idea about, if the controller will interpret the norms the same way than they did, if all the declarations are up to date... (Massat et al., 2015; Mesnel, 2017). Farmers feel like they are immediately considered as possibly guilty. The consequences of a non-conformity can be dramatic for farmers whose revenue depends on subsidies (Massat et al., 2015; Mesnel, 2017).

Overall, farmers get the feeling that civil servants and elite are out of touch with reality of agricultural production. The norms that are decided are not always coherent with the situation

¹³ Appointed in the Figure 7 Figure 7 by: « ST contraintes et conséquences des politiques publiques »

¹⁴ Appointed in the Figure 7 and Figure 9 by: « Les contraintes administratives qui en découlent, les excès de contrôles »

| Domaine de contrôle | Désignation du contrôle |
|--|---|
| | Aides surface 1er pilier (contrôle terrain) |
| | Aides surface 1er pilier (contrôle télédétection) |
| DAC Élisibilité des sides les silies | PMTVA |
| PAC- Éligibilité des aides 1er pilier | Aide à l'engraissement des jeunes bovins |
| | Aides ovine et caprine |
| | Aide au veau sous la mère |
| PAC- Éligibilité des aides 2nd pilier | Aides surface 2nd pilier (ICHN, PHAE, MAE) |
| | Aides à l'investissement et à l'installation, prêts bonifiés, Leader Contrôles sur place |
| PAC – Aides 2nd pilier (hors SIGC) | Aides à l'investissement et à l'installation, prêts bonifiés, Leader Visites sur place |
| | BCAE |
| | Environnement |
| PAC – Conditionnalité | Phyto – production végétales |
| | Santé - productions animales - Identification bovins ovins caprins |
| | Protection animale |
| | Aides à l'investissement vin |
| | Aide à la promotion vin sur les marchés des pays tiers |
| PAC OCM viticulture | Restructuration vin |
| | Certification des vins sans AO ou IG |
| | Certification des bois et plants de vigne |
| | Fonds opérationnel |
| PAC OCM fruits et légumes | Non récolte |
| | Embargo russe |
| PAC Apiculture | Transhumance Aides aux cheptel |
| | ACAL |
| PAC – OCM lait | Quotas livreurs directs |
| | Quotas livreurs en laiterie |
| | à la rénovation du verger arboricole |
| Aides nationales | à la rénovation du verger cidricole |
| | pour les bâtiments de stockage de Pommes de terre |
| | Identification |
| | Protection animale |
| | Alimentation animale |
| | Pharmacie vétérinaire |
| | Producteurs de lait cru |
| | Bonnes pratiques d'hygiène |
| Paquet hygiène et contrôles officiels | Aquaculture |
| | Dépistage de salmonelle en élevage avicole |
| | Intrants |
| | Santé du végétal et passeport phytosanitaire |
| | Plan de surveillance et plan de contrôle (PSPC) – production primaire végétale |
| | Plan de surveillance et plan de contrôle (PSPC) – production animale |
| | Producteurs fermiers |
| | Agences de l'eau – contrôles aides et redevance |
| | Directive nitrates |
| Environnement | Police de l'eau (hors directive nitrates) |
| | Police des espèces et des habitats |
| | ICPE Elevages – contrôles inopinés, plaintes, accidents |
| | ICPE Elevages – plans de contrôle et de surveillance |
| Travail | Lutte contre le travail illégal |
| | Respect du droit du travail |
| | Travail dissimulé / travail illégal |
| Protection sociale | Vérification de l'assiette des cotisations sociales |
| Trotection sociale | |
| | Assujettissement |
| | Assujettissement contrôles en exploitation, les interventions en exploitations agricoles suivantes : |
| Pour mémoire, ne sont pas considérés comme des | |
| Pour mémoire, ne sont pas considérés comme des - les contrôles liés à des démarches volontaires (bo | contrôles en exploitation, les interventions en exploitations agricoles suivantes : |
| Pour mémoire, ne sont pas considérés comme des - les contrôles liés à des démarches volontaires (bo | contrôles en exploitation, les interventions en exploitations agricoles suivantes : nne pratiques, certifications environnementales, labels et AOC,) nquêtes statistiques - les contrôles fiscaux |

Figure 10 : List of public controls that French farmers go through (Massat et al., 2015)

of the farm. The norms that are decided are not always coherent with the situation of the farms. And sometimes, the implementation of new norms may have detrimental effect. For example, in the 2015 reform of CAP conditions, a new rule conditioned the removal of hedges and trees to a permission from public authorities. Right before the implementation of this new rule, many farmers decided to sort out and cut trees and hedges that could become a problem (Mesnel, 2023).

4.1.2. How to make controls more tolerable? Some recommendations

To make controls more tolerable, some recommendations can be expressed. Frédérique Massat, a French deputy from Ariège, received a mission from the French prime minister in 2014: to draw up an assessment of farm inspections and identify ways of improving practices, in close collaboration with the farming community and the authorities responsible for inspections(Appendix 2). This study only concerns public controls, but some of the recommendations can be generalised and applicable to any type of control happening on a farm. Three recommendation scales can be identified:

- Quick and easy changes that can be applied to the process of control and the controller farmers interactions on the farm
- Evolution of the implementation of the control, its modalities and connections between all the controls that may be done on a farm
- At the origin of the conflicts, regulations and specifications can be defined and implemented differently.

4.1.2.1. Changes in the course of the control on the farm and the interaction controller / farmer

Controls can be more pedagogic by being more than just an application of sanctions when there is a non-conformity (Mesnel, 2017). Some ideas and recommendations have been emitted by several stakeholders of the agricultural sector at different moments of the control process.

Before the control:

- A notice mail is sent to famers. The form should be polite and all the information needed about the control, its context, the documents needed, the controller, the rights and duty of the farmer etc. should appear (Baudinet and Perez, 2017).
- A phone call can create a first contact between the farmer and the controller, and a good opportunity to check if the farmer has questions and agree on the control date and process (Baudinet and Perez, 2017).

During the control:

- The control should happen in a neutral place. The barrier between public and private life of farmers is thin and having a control within the farmers' house can be intrusive.
- Explaining the context of the control and what will be checked is important. The controller may also let the farmer know that he can answer any questions about the regulations and his farm (Baudinet and Perez, 2017).
- The farmer is an actor of the control he has to feel this way. That is why it is important that the control point are commented and explained by the controller (Baudinet and Perez, 2017).
- If some documents are produced during the control, for example to calculate data, the controller should be able to give a copy to the farmer. It can be useful and interesting (Baudinet and Perez, 2017).

After the control:

- If it is possible, the controller should tell the farmer at the end of the control if he noticed some infractions and their nature (Massat et al., 2015)
- Whatever the result is, the farmer should get a letter giving the results of the control and thanks him for his time and cooperation (Baudinet and Perez, 2017).

All those recommendations may help softening the suspicion climate that is felt during controls processes and become less intrusive for farmers (Baudinet and Perez, 2017).

4.1.2.2. Improve the interactions between the different controls

Several controls may happen on a farm in a short period and be conducted by different control institutions (Figure 10). In France, no coordination between those interventions is implemented but some consider that there should be. It seems logical that a farmer shouldn't go through two different controls within the same week. Moreover, controllers need to know when the last control was, what was the result, if the control went all right, if there are any special things to know about the farmer, his situation, the context of his farm or anything else that can be relevant (Baudinet and Perez, 2017). If a farmer is struggling, the MSA¹⁵ and agricultural chamber should be able to exchange information to the control organisms (Massat et al., 2015). In France, an informatic tool is being developed to improve it (Baudinet and Perez, 2017).

To inform the controller of the previous controls and the situation of the farmer is a first step. Moreover, currently, some parameters may be checked twice by different organisms because they are important for several regulations. For example, some French farmers undergo two nitrite controls: one for the CAP conditionality and the other one by water policies. A second step can is suggested with more structural changes:

- Farms that have a certification could be valorised with a decrease in public controls pressure. Usually, private certifications control the farm according to the regulations and the specifications of their rulebook (Massat et al., 2015).
- Some agricultural stakeholders suggest having a unique control authority for all the regulations and certifications that a farmer can be subject to (Boiteau, 2016).

Beforehand, between two control periods, organising regional meetings with the different control organisms and farmers can help pacify the relations. Those meeting could be used to report the difficulties met during previous controls, discuss about ameliorations that can be implemented (on both sides), inform farmers of the new evolutions in the regulations and explain the modalities of the next controls (Massat et al., 2015). Then non formal discussions that will take place between farmers and controllers.

4.1.2.3. Evolutions of the regulations and specifications framework

As detailed previously (section 354.1.1.3), policymaker appear disconnected from farmers' realities and implement norms that don't make sense in all the contexts. A first structural change could be to allow controllers to adapt regulations framework to the constraints faced by the farmers (as local weather conditions) (Petit, 2013; Centre d'études et de prospective, 2022). In addition, administrations can make the most of professional farmers organisations and controllers' field experiences by reviewing the sanction scales if the latter agree on thinking that it is not coherent.

¹⁵ MSA : Mutualité Sociale Agricole i.e. in English : *Agricultural Social Mutual*.

Table 5: The agroecological charter and the indicators associated (part 1)

| | Ch | arte | Indicateur associé |
|-----------|---|--|---|
| | | Couverture maximale des sols | Taux de couverture du sol |
| | | Allongement et diversification des rotations | Durée moyenne rotations |
| | Préservation des sols | Travail mécanique des sols | Surface labourée |
| | | minimal | Surface en semis direct |
| | | Association culture-élevage (au moins 1 espèce herbivore) | Association culture/élevage |
| | Limitation des intrants de synthèse | AB sous 5 ans après installation | Certification bio (label / conversion) Préciser temps restant avant les 5 ans |
| | | Diversifier les assolements et types élevage | Avoir 2 assolements différents |
| | Diversification | Associer plsrs espèces - variétés au sein d'un assolement | Nombre de types de cultures principales et élevage présents sur l'exploitation |
| | | Cultures pérennes et annuelles | Proportion SAU cultures pérennes |
| | | Cultiver - élever des espèces rustiques et - ou patrimoniales | Présence et préservation de races locales |
| | Adaptation au terroir | Espèces adaptées au terroir et aux conditions climatiques | Espèces adaptées au terroir (territoire, climat, pédo etc) |
| | Bien-être animal | Besoins physio et comportementaux | Chargement (UGB / ha) |
| Agronomie | | Approche préventive / pas de traitements systématiques | Usage des traitements vétérinaires |
| | | Privilégie le plein-air | Pourcentage du temps passé en prairies (moyenne sur la durée de vie totale) |
| | Gestion de la biodiversité | Minimum 10% surface IAE | % IAE (IAE = haies, arbres, fossé non maçonnés, mare, jachères, bordures non productives) |
| | Présence de zones à enjeux écologiques | Présence de zone à enjeu protégée | Surface Natura 2000 Surface ZIEE Surface ZNIEFF Surface zone humide |
| | | Maximiser captation (haies, couverts, travail des sols) | Présence d'aménagements et pratiques pour maximiser la captation d'eau |
| | | Maximiser stockage (MO sol) | Taux de Matière organique du sol |
| | Gestion de l'eau | Limiter la consommation (espèces adaptées) | Type de production adaptée à la disponibilité en eau |
| | | Préserver la qualité (épuration écologique, respect des chargements, maîtrise épandages) | Qualité de l'eau |
| | Approche circulaire | Utiliser au max les coproduits et limiter les déchets | Gestion des déchets et co-produits |

In parallel, administration can assign a new mission to the different organisms in charge of the control: helping farmers fill in their declarations. Farmers regret the fact that they only interact with stakeholders of a certification or public administration body during a control (Mesnel, 2017). Relationship between farmers and administration are not personalised anymore.

On a more structural level, simplifying agricultural policies seems to be a necessary condition to encourage farmers to agree with ecological transition policies. A caution needs to be taken, simplifying doesn't mean that the policies have to be deleted, it can be an improvement of their readability and a stabilisation of the regulations and specifications frameworks. It could help farmers feel more serene about their investments (Baudinet and Perez, 2017; Mesnel, 2024).

In this context we wonder:

- a. How to measure the impact of a farm on its environment and assess its sustainability?
- b. How to implement monitoring audit and private controls that are the least constraining and easily accepted by farmers?

Those questions will be treated through the spectrum of FEVE's activity and detailed in the following part.

Chapter 2: Methodology

1. Monitoring the respect of the charter and its specifications

1.1. FEVE's charter and the associated specifications

FEVE operates based on the agroecological charter (Appendix 1) which was developed internally. Farmers who establish or consolidate their farms thanks to an acquisition by FEVE commit to complying with the charter. In parallel, members of the public can invest with the guarantee that their money will be invested in projects that fit the charter scope. The charter is organised in three sections:

- An agronomical dimension: The primary specification of the charter (Table 5) is that the farm has to produce organic (the certification process must begin within five years after the establishment).
- A social dimension
- A societal dimension

Table 6: The agroecological charter and the indicators associated (part 2)

| | С | harte | Indicateur associé | |
|-----------|-----------------------------------|--|--|--|
| | | Autonomie gestion et décision | Capacité de prise de décision et de gestion | |
| | Indépendance | Limiter dépendance appro et services extérieurs | Autonomie exploitation (approvisionnement et services) | |
| | Gouvernance | Mode de gouvernance définit de manière collective | Modes de gouvernance et de prise de décision définit de manière collective | |
| Social | Travail, capital et revenus | Revenu décent et équitable pour tous les travailleurs | Revenu décent (supp ou égal SMIC) | |
| | Dorto do dos | Partage au-delà du périmètre de la ferme | Partage de connaissances hors de l'exploitation | |
| | Partage des connaissances | Enregistrer et diffuser informations de mesure impacts agroécologiques, sociaux et éco | Mesures d'impact et communication | |
| | Transmission facilitée | Orga et structure permettant l'arrivée de nouveaux PP | Potentiel de transmission de l'exploitation | |
| | | Limiter énergies fossiles | Production énergie renouvelable à la ferme | |
| | Impact environnemental fort | Limiter matériaux non recyclables - non renouvelables | Mise en place de mesures pour limiter l'usage de matériaux non renouvelables | |
| | | Maximiser investissements responsables (bâtiments, machines) | Investissements responsables | |
| Sociétale | | Partage de la connaissance au sein du territoire | Activité d'agrotourisme | |
| Societale | Intégration au | Circuit court (achats & vente) | Ventes en circuits courts (<80 km + direct conso) | |
| | territoire | Diversification modes d'appro et | Diversité des approvisionnements | |
| | | vente | Diversité des débouchés de vente | |
| | Alimentation de | Qualité des produits | Produits de qualité | |
| | qualité | Produit fini en circuit court | Atelier de transformation à la ferme | |
| | Rôle patrimonial | Impact visuel de l'activité | Intégration du bâti dans le territoire | |

The charter's goal is not to be restrictive and a constraint on farmer's practices, it is intended to be inspirational. Also, it ensures that FEVE's farmers and investors have a common vision of agroecology and sustainable production system.

Through the publication of its impact report (Boulet and De Turckheim, 2024), FEVE reports on farmers practices through the lens of the charter's indicators. Thereby, knowing and being aware of the evolutions of the farms is important. More and more famers are being established using FEVE funding solution. A methodology needs to be implemented to be able to know what happens on the farm when needed.

1.2. Modalities of the charter's specifications' control

1.2.1. How to control?

To evaluate farmers' performance based on the charters' indicators, some data and information about their farms need to be acquired (Table 5). Most of that information are already acquired by several stakeholders interacting around the farmers, especially public control corpse (Figure 10). In France, as part of the CAP subsidies attributions, farmers reports several pieces of information on $T\acute{e}l\acute{e}pac^{16}$ (they evolve according to the criteria for subsidies attribution). Those declarations requires that the farmer sends supporting documents to double check that the data declare is consistent. Among this data, 25% of the indicators listed in Table 5 can be found.

As the report impact of FEVE has to be written every year, the data that evolve regularly needs to be updated annually. To do so, several approaches can be conceivable:

- a. **Declarative documents:** Request the submission of declarative documents containing the data required to verify the charter
- b. **Questionary:** Directly solicit farmers to complete a questionary. This can be done in person or remotely.
- c. **Questionary Declarative documents:** Combine the two approaches by asking farmers to provide necessary data and supporting documents. This method helps verify the accuracy of the transmitted data and can be used to gather the required information.
- d. **Control:** Conduct on-farm inspections at appropriate times. Visits allow for the observation of farmer's practices and enable the collection of data needed to assess farm performance against the charter's specification.

Organizational and financial constraints must be considered when choosing the control modality. The need for travel is a potential obstacle that should be accounted for when implementing one of these methods.

1.2.2. Assessor

Once the methodology to acquire the data is decided, it is important to decide who is responsible for the data acquisition. Several stakeholders can be considered to implement this charter control.

- A. **FEVE workforce**: The FEVE team can handle this. It takes time and may require agronomic skills and knowledge to apply the **d. Control** process (if implemented).
- B. **External company**: An external private company can be commissioned by FEVE to ensure that the practices implemented on the farm are in line with the charter.

¹⁶ https://www.telepac.agriculture.gouv.fr/telepac/auth/accueil.action

They can act as a third-party verification and the process could be compared to a TPC (section 2.3.2.1).

- C. **Project promoters**: The various farmers established with FEVE can assess each other against the charter's indicators. The functioning would look like a PGS (section 2.3.2.2).
- D. **Investors**: The citizens who invested in FEVE's property organisation can be involved. They invest in FEVE's landholding trust to support the establishment or consolidation of agroecological farms. The impact report (Boulet and De Turckheim, 2024) and data acquisition are intended to them. It would another type of PGS (section 2.3.2.2) functioning.

These four types of stakeholders can be mobilized to acquire the data needed for the charter verification and the impact report. The advantages and constraints of each option need to be balanced.

1.2.3. When should the control take place?

After determining who will acquire the information and how, the frequency of the data acquisition and the period of the year needs to be established.

The frequency highly depends on several parameters:

The modalities of the control. More precise and advanced control may require less frequent application.

- The farm being controlled. The first years of establishment will be the ones with the most changes. Since the organic certification process must begin within five years of establishment; the control frequency may decrease once the farm achieves stability and organic certification.

The period of the year to do the control is important. Farmer is the job with the most irregular work cycles (Boisard and Fermanian, 1999). But usually, winter is the quietest period for farmers and there are less constraints (Antonin, 2011). However, the first years after the establishment, farmers are very busy and may not always be available for a charter's control (whatever the modalities are).

Operational parameters such as the quality of the process, its cost, and the availability of stakeholders (both in terms of timing and duration) need to be carefully coordinated to optimize the audit process.

2. Global assessment of the farmer's practices

Verifying that the farms in which FEVE owns some land match FEVE's agro-ecological charter is an essential first pillar in ensuring that FEVE fulfils its mission and meets investors' expectations. However, the indicators assessed by the charter are not enough to assess and evaluate the sustainability of a farm, neither to help farmers identify topics and fields in which they could try to improve their functioning. A full assessment of the farm's sustainability can complement the charter's control.

2.1. How to assess the sustainability of a farm?

As presented before, several methodologies can be used to assess the sustainability of a farming system (section 1.3.2) and they differ according to the conception of a desirable sustainability. In the context of FEVE's raison d'être, several types of sustainability can be identified. First of all, the sustainability of the farm after its establishment is important. One of FEVE's main mission is to care for sustainable farms establishment (the financial equilibrium

of FEVE depends on it). The second sustainability that is looked for can be declined in three dimensions: agronomical, social and societal (section 1.1). The aim is to have production systems that would be sustainable (at a global scale) if they were generalized. Looking at that two sustainability, the performances of the farm as well as the performance of the overall farm system in which it is embedded need to be assess.

According to the Table 2, within the studied methodologies, IDEA4 seems to be the only one assessing two sustainability: farm's sustainability and the agro-ecological performances of the farm.

2.2. Assessment ways and means

As for the charter's control (section 1.2), once the most appropriate sustainability assessment method is identified (section 1.2.1), some other modalities of the assessment have to be defined (sections 1.2.2. and 1.2.3): how to carry out the assessment, who will be in charge of doing it, how often, when and where. The possibilities are similar to the ones presented for the charter control (section 1.2.):

- extracting the data from the farmers' declarative documents by reviewing them
- giving him a form that he has to fill out with all the questions and the data needed
- mixing those two methods: the farmer fills up a form and provide the declarative documents that corroborate the data he gave. Then, the information is verified by a third party through the documents that were sent.
- Having someone who goes and visit the farm. He can check some specific parameters and practices. The person and the farmer can fill out a form together.

Several stakeholders can collect the data and verify its accuracy:

- Someone from the company that orders the audit (FEVE)
- Peers: other farmers using the land bought by FEVE
- The investors: Indirectly, they are the farmer's owners, and the ones asking for the sustainability of the system.
- A service provider with some knowledge on the topic.

As for the charter's control (section 1.2.3.), the last modality that will need to be decided is the frequency of those evaluations. It is time-consuming and costly but useful to follow the evolutions of the farm and be able to report the farmers' activity to the investors. It can also be a good indicator to know how the farm is doing and if the farmer needs some support and help.

3. Field assessment on the farm's impact on the environment

All those processes are here to make sure that the projects are sustainable. The assessment of the sustainability of the farm and the control of the charter are mainly based on practices and declarations. There are no direct measurements of the impact of farming practices on the environment, as farmers often reproach controls organisms (as seen in Chapter 1: State of the art, section 4.1.1.3).

3.1. Several field measurements can be done

Agroecological practices are supposed to have an impact on their ecosystem and many of its components. But some things in the ecosystem are more sensitive to changes at farm scale than others. For example, biodiversity depends more on the territory's practices than individual

| AES | Indicators | Detailed explanations |
|--------------------------|---|--|
| Provisioning services | Food Fodder and fiber | Agroecosystems provide humans with a variety of goods. Grain, crops, domestic animals, and fisheries provide food. Cash crops such as cotton, |
| | Raw materials Medicine Energy and fuel | hemp, ginseng, rape, and peanut provide industrial raw materials, medicinal materials, energy, and fuel ^{1, 2} . |
| Regulating services | Carbon sequestration | Carbon sequestration in agroecosystems through crop photosynthesis and increasing soil organic |
| | Local climate regulation | matter ² . The transpiration of crops and other plant components, and evaporation from farmland irrigation, can effectively decline the heat island effect ^{2, 3} . |
| | Waste decomposition | Soil microorganisms and invertebrates decompose dead tissues such as roots, stems and leaves of crops or other plants, as well as organic |
| | Soil conservation | fertilizers ^{1, 4, 5} . The covering of crops, herbaceous plants and shrubs, and the retention of stubble and straw after crop harvest can maintain soil by reducing erosion ^{1, 2, 5} . |
| Supporting services | Soil structure and fertility | Soil pore structure, soil aggregation and organi- matter are fundamental to nutrient acquisition by crops, as well as water retention ^{1, 2, 6} . |
| | Nutrient cycling | The cycling of nutrition elements such as nitrogen and phosphorus between the soil, crop- and microorganism, is basis formaintaining soil fertility and productivity ^{1, 5} 7. |
| | Biological control | The predators in agroecosystems, such as arthropod predators, insectivorous birds, bats, and microbial pathogens, act as natural enemies to agricultural pests ^{1, 2, 4, 5} . |
| | Pollination | The pollinators, such as bees and butterflies, help to fertilize crops by pollination, and is key to maintain a stable production for animal- pollinated crops ^{1, 4, 5} . |
| | Weed control | The seed predators like birds, crickets, ants and beetles, prevent weed seeds from entering the soil seed bank and reduces the potential weed infestation in the crops ⁶ . |
| Cultural services | Aesthetic value | Agricultural landscapes may also meet human needs for an appealing aesthetic, as evidenced by the well-managed croplands that dominate the pastoral aesthetic ⁸ . |
| | Recreations and tourism | Entertainment based on agricultural resources and rural life and culture, such as harvesting and fishing ^{1, 2} . |
| | Cultural heritage | A unique agroecosystem created through the long-term coordinated development of humans and the environment, such as |
| | Spiritual and religious value | Hani terraced landscape in China ⁹ . Agricultural folklore that is derived from the folk belief and worship, such as sacrificial activities integrated with agricultural production ¹⁰ |
| | Science and education | People gain knowledge about agriculture through agricultural practice or scientific research ¹⁰ . |

Refs.: ¹ Rana et al., 2018. ² Zabala et al., 2021. ³ Kumar et al., 2017. ⁴ Zhang et al., 2007. ⁵ Huang et al., 2015. ⁶ Schumacher et al., 2020. ⁷ Holland et al., 2018. ⁶O'Brien et al., 2020. ⁹ Liu et al., 2018. ¹⁰ Hanaček and Rodríguez-Labajos, 2018.

Figure 11 : Key indicators and detailed explanations of agroecosystem services (Liu et al., 2022)

farms' ones (Boeraeve et al., 2020). According to the indicator, measuring impacts of local practices' change in a short-term period may hardly be relevant.

As listed in the Figure 11, there are several agroecosystem services: Provisioning services, regulating services, supporting services and cultural services. To measure the impact of practices evolution on the environment, regulation and support services are the ones that can be assessed. The indicators used to assess the ecosystem services can be grouped into three categories:

- Soil Quality
- Climate regulation
- Biodiversity

Soil measurement indicators are the most localized, as their values and changes are less influenced by neighbouring practices than biodiversity or climate regulation. This makes it simpler to assess the impact of farmers' practices on soil parameters. Furthermore, given that FEVE's role involves acquiring agricultural land and leasing it to farmers, soil measurements appear to be the most concrete and relevant parameters that can be effectively monitored.

3.2. Modalities of the soil diagnosis

In the same way as for the Modalities of the charter's specifications' control and the Global assessment of the farmer's practices, the modalities of the soil diagnosis have to be determined.

The first decision that has to be done is about the parameters and indicators that will be measured. Soil evolution requires time. To see short-term significant changes in soil quality, only few indicators can be measured. Soil quality indicators can be split into 3 categories: physical, chemical and biological properties. The last category shows the lowest short-term sensitivity to changes in agricultural management, the seasonality of the sampling may have more impact on the measurements than the management (Gyawali et al., 2022). Amongst the physical indicators, aggregate stability is a good indicator of short-term changes in soil health due to its role in many other soil functions and health indicators (carbon stabilization, water infiltration, resistance to erosion). Among the chemical properties of soil, CEC measurements show significant short-term changes in response to two years of evolution in agricultural management (Gyawali et al., 2022).

After deciding the indicators that will be measured, the sampling method have to be chosen. Three methods are common (Carter and Gregorich, 2007):

- Random sampling: take several samples in the same unit (field, farm etc) in random areas. The samples are mixed and send to the laboratory. The result is an average one and doesn't represent the heterogeneity of the sampled area. The main advantage is that it is cheap.
- Grid sampling: A grid system is put on each section of the farm; one sample is taken in each grid and separately send to the lab. It is the most expensive method and provide highly detailed information about the farm.
- Benchmark sampling: a single site is selected (supposedly representative) for each unit (portion of field, field, similar areas etc). At least, twenty samples are randomly taken from the benchmark site and composited. Then, send to the lab. The main advantage is the possibility to see a concrete evolution of the parameters within the benchmark area.

Then, the sampler has to be identified. The same stakeholders as for the charter's control (1.2.2) and the sustainability assessment (2.2) can be recruited: someone from FEVE, other

| Task | Time spent | |
|--|------------|--|
| Training | 3 days | |
| Data acquisition | 4 hours | |
| Data treatment | 4 hours | |
| Analysis and redaction of the report | 1 day | |
| Presentation of the results and discussion | 2 hours | |
| Time spent per farm (without training) | 2 days | |
| Time spent per year (21 farms in 2024) | 45 days | |

Table 7: Time spent by the assessor to realise IDEA4 diagnosis (Zahm et al., 2023)

Table 8: Global cost of the IDEA4 diagnosis according to the assessor - without taking into account training costs

| Stakeholder | Data acquisiton | On site data acquisition | Data treatment - Report redaction – Presentaiton of the result | Travel expenses | Time spent | Additional work from FEVE (coordinate and data analysis) | Cost ¹⁷ |
|---------------|--------------------|--------------------------------|---|--------------------|---------------|---|---------------------|
| FEVE | Yes | Yes | Yes | 1 | 4 | None | 850€ ¹⁸ |
| TEVE | | | | person | days | | |
| Investor | Yes | Yes | No | 2 – 3 | 1 | 3 days | 1075€ ¹⁹ |
| mvestor | | | | persons | day | | |
| Other farmers | Yes | Yes | No | 2 – 3 | 1 | 3 days | 1075€ ¹⁹ |
| Other farmers | | | | persons | day | | |
| EcoFarms | Yes | No | Yes | Х | Х | Х | 750€ ²⁰ |

 $^{^{17}}$ It is estimated that 1 day of work costs around 150€ and the travel expenses for one person, around 250€

 $^{^{18}}$ 4 days of work and 1 person travel expenses for one day: $4*150{\ensuremath{\in}+1}*250{\ensuremath{\in}}$

 $^{^{19}}$ 3 days of work (FEVE) and 2.5 persons travel expenses for one day: $3*150 \in +2.5*250 \in$

²⁰ 1500€ for the complete diagnosis / 500€ for annual updates. One complete diagnosis every four year.

farmers, the farmer established on site, an external company or investors. In the meantime, the laboratory that will analyse the samples has to be identified.

The most opportune period of the year to sample seems to be the spring (and autumn). It should be done on soil that is not too wet, too dry, that has not yet been depleted by a crop and where the field is accessible. Then, to assess the evolution of soil quality with minimal bias possible, it should be systematically done at the time of the year (Volonté paysanne du Gers, 2012). There is a general consensus on a 5-year frequency for sampling. Other factors will impact the decision: the cost, the time spent by various stakeholders and the value placed on the measurements by the farmers.

Soil analysis is a field measurement that reflects the quality of agricultural management of the fields. It can be used to monitor the evolution of the fields owned by FEVE when cultivated by the farmers.

4. Bilan

The follow up of the farms established with the implication of FEVE can be done in many different ways. The three relevant types of monitoring (charter control, sustainability assessment and soil quality) detailed above, have to be linked in their implementation and the use of the results. Some other stakes can be addressed by this monitoring. It is useful for FEVE, to maintain frequent contact with the established farmers and receive regular updates about the management of the farm and its evolutions.

Chapter 3: Results

1. FEVE's process to assess and monitor established farm's sustainability

1.1. Assessment of the farm's sustainability

To assess the sustainability of the farm, the IDEA4 MCA has been selected. As shown in the Table 2 (section 1.3.2), it is the only method studied that assesses the farms' sustainability with a strong agroecological vision. Moreover, it combines the two types of sustainability that FEVE is interested in: the farm's and the agro-ecological (social, societal and environmental) ones (1.1). The IDEA4 calculator is open source. To be able to use it, a three-day training is necessary: the tool is complex, and some limits and precautionary measures need to be detailed and discussed. Then, four days are needed to carry out one diagnosis (Table 7). Data collection needs to be done onsite, because the goal of the method is to understand the functioning of the farm and provide areas for improvement according to the assessment results and the context of the farm (Zahm et al., 2023).

The different stakeholders that can be in charge of the diagnosis are the other farmers, the investors, the project manager (from FEVE) and an external company (1.2.2. Assessor). The external company that will be looked at is EcoFarms21: a French company that provides diagnosis based on the IDEA4 methodology to evaluate farm CSR performance. The parameters currently being examined are the global costs of the diagnosis (Table 8), the time

²¹ https://www.EcoFarms.co/

| Stakeholder | Contact FEVE – project promot er | FEVE knowled ge of the farm | Animatio n of the investor's communi ty | Meetin g among st FEVE farmer s | Limit the time spend by FEVE 's team | Impartiali ty of the diagnosis | Relatio n farmer – assesso r | Few trainings requireme nt |
|------------------|--|--------------------------------------|---|---|---|--------------------------------------|---|-------------------------------------|
| FEVE | ++ | ++ | | - | | | ++ | + |
| Investors | + | + | ++ | | | - | + | |
| Other farmers | + | + | - | ++ | | | ++ | - |
| EcoFarms | - | - | | | ++ | ++ | - | ++ |

Table 9: Other parameters to consider when selecting the stakeholder in charge of the IDEA4 diagnosis

Table 10: Stakeholder and the section of soil analysis process in which they can be implied.

| Stakeholder | Sampling on site | Analysis of the samples | Data analysis – reporting | Recommen dations to the farmer | Cost per farm |
|--|---------------------|-------------------------------|---------------------------------|--------------------------------------|------------------|
| FEVE | Х | | | | |
| Investor | X | | | | |
| Farmer established on site | X | | | | |
| Other farmers | Х | | | | |
| Soil laboratory (Celesta-lab ²² , Auréa ²³) | | X | X | Х | 1600€ |
| Pedologist | Х | | Х | Х | ~ 1000€ |
| Genesis | X | Х | Х | | 2500€ |

²² https://celesta-lab.fr/

²³ https://www.aurea.eu/

required from FEVE's team and the ability to do most of the diagnosis within a few months (i.e. minimal training requirements).

According to the Table 8 and

Table 9, based on those parameters, at the moment EcoFarms is the most suitable stakeholder to lead the sustainability diagnosis of the farms established with FEVE. Assessments were conducted to understand how EcoFarms operates. Their work aligns with the needs and expectations. Indeed, they take care of the sustainability assessments that needs to be done.

1.2. Soil analysis

The soil analysis process is divided into four parts: sampling, analysing the samples, reporting the data and interpreting it according to the farm's context and needs. Having formulated recommendations is ideal to encourage farmers to use the analysis.

As explained previously (section 3.2.), several stakeholders can be enlisted in the process. Amongst those, Genesis²⁴ is identified as an external company that can take care of the whole process, from the sampling to the results' reporting. Genesis' approach is innovative in the choice of the sampling areas. They group farm soils in homogeneous soil groups through satellite and cartography analysis and sample in some areas of those group. It is meant to minimise the amount of samples (and cost) and still be able to assess most of the farms' soils. The results on their platform are pedagogical through a scoring of the soil quality on different indicators. But they don't formulate recommendations to the farmers. Celesta-lab²² and Aurea²³ are two laboratories specialised in soil analysis and agro-environmental recommendations. The scope and skills of each stakeholder identified is detailed in the Table 10.

Initially, FEVE's priority is to obtain data about the soil quality of the farms. Within FEVE's team, no one has specific pedological knowledge that are needed to understand and assess soil quality based on raw data (Table 10). The solution provided by Genesis is the most straightforward and quick to implement because they take care of the whole process, from the sampling to the reporting and evaluation of the results. Their reporting is very pedagogical and fits FEVE's needs (reporting and monitoring of soil evolutions).

1.3. Charter's control

The agroecological practices of the farms can be assessed through the charter's impact indicators (Appendix 5). Four data acquisition methods (section 1.2.1) can be implemented. They are ranked (from one to four) according to criteria that are important to FEVE (Table 11).

When comparing the methods and considering all the constraints with equal importance, the questionary emerges as the best method. But its main constraint is the administrative redundancy because it overlaps other data acquisitions and. To address this issue, we found that most of these indicators are already measured through the sustainability assessments conducted by EcoFarms (section 1.1.) and the soil quality diagnosis provided by Genesis (section 1.2.), cf Table 12. After this first data acquisition, some of the missing data are collected and controlled by the ASP for the CAP attributions (section 1.2.1.). After collecting raw data from EcoFarms's

²⁴ https://www.genesis.live/

assessment, Genesis' soil quality diagnosis and CAP declarations, only seven indicators out of 38 will need to be collected through a questionary.

| | Declaratory documents | Questionary | Questionary + Declarative documents | Control on farm |
|--|--------------------------|-------------|---|--------------------|
| Lowest cost | 1 | 1 | 1 | 4 |
| Least time spend by the farmer | 1 | 2 | 3 | 4 |
| Least time spend by FEVE | 3 | 1 | 2 | 4 |
| No need to travel to the farm | 1 | 1 | 1 | 4 |
| Contact FEVE – farmer | 4 | 2 | 3 | 1 |
| Improving and updating FEVE's knowledge of the farm | 4 | 2 | 3 | 1 |
| Lowest administrative redundancy | 2 | 3 | 4 | 1 |
| Limit the redundancy with data already available | 1 | 3 | 4 | 2 |
| Total ²⁵ | 17 | 15 | 21 | 21 |
| Global ranking ²⁶ | 2 | 1 | 3 | 3 |

Table 11: Ranking of the different methodologies regarding the constraints that can be faced

Table 12: Charter's impact indicators and the availability of the data (more details in the Appendix 5)

Total number of indicators

38

- Indicators assessed by EcoFarms and 24 Genesis

²⁵ Sum of all the rankings collected

²⁶ Indicative ranking with no relative importance of one parameter on another

- Indicators available in CAP declarations 8

- Indicators not available in any of them 7

| The intervention | Farmer's task | Time necessary (hours) | Recurrence |
|--|---|------------------------------------|--|
| Soil quality diagnosis – Genesis | <i>Soil sampling</i> : Showing the farm to the sampler | 0.5 | Every 5 years |
| Sustainability assessment – EcoFarms | <i>Audit</i> : Answering the questions | 5 | Annual |
| Results of soil quality diagnosis and sustainability assessment – EcoFarms & Genesis | <i>Videocall</i> : Assist to a result presentation and discuss about the results | 3 1.5 | Every 5 yearsAnnual |
| Charters control – CAP declarations and questions | Transmit instructed CAP declarations & answer few complementary questions | 0.25 | Annual |
| Maximal amount of the soil quality assessment | me needed / year – with | 8.75 | Every 5 years |
| Amount of time neede quality assessment | d / year - without soil | 6.75 | 4 years out of 5 |

Table 13: Farmers' estimated time required for the whole monitoring process and associated tasks

| 2025 | | | | 2026 | |
|--|--|---|---|--|--|
| Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| | Genesis • Soil sampli mars 1 - mai 31 | | port | | |
| | févr. 28 | Farms • Results report | | | s • Answer sust vr. 28 |
| | | | | I | |
| | | | | | |
| | | | | | arter questions |
| armer • Most available period lov. 1, 2024 - févr. 28, 2025 | | | | | |
| | Q1 EcoFa févr. 1- | Q1 Q2 Genesis · Soil sampli mars 1 - mai 31 EcoFarms · Answer sustainal févr. 1 - févr. 28 Eco Genesis · Soil sampli mars 1 - mai 31 | Q1 Q2 Q3 Genesis · Soil sampling mars 1 · mai 31 Genesis · Results regiun 1 · juin 30 EcoFarms · Answer sustainability assessment févr. 1 · févr. 28 EcoFarms · Results report mai 1 · mai 31 EcoFarms · Answer sustainability assessment févr. 1 · févr. 28 EcoFarms · Results report mai 1 · mai 31 EcoFarms · Answer sustainability assessment févr. 1 · févr. 28 EcoFarms · Results report mai 1 · mai 31 EcoFarms · Results report EcoFarms · Results report Image: State | Q1 Q2 Q3 Q4 Genesis · Soil sampling mars 1 · mai 31 Genesis · Results report juin 1 · juin 30 Genesis · Results report EcoFarms · Answer sustainability assessment febr. 1 · febr. 28 EcoFarms · Results report mai 1 · mai 31 EcoFarms · Results report EcoFarms · Answer sustainability assessment febr. 1 · febr. 28 EcoFarms · Results report EcoFarms · Results report Genesis · Cap · Ha oct. 30 · n Genesis · Results report Genesis · Results report videocal juin 30 · juil. 1.4 Genesis · Most available period ov. 1, 2024 · febr. 28, 2025 Genesis · Genesis · Results report Genesis · Cap · Ha oct. 30 · n | Q1 Q2 Q3 Q4 Q1 Genesis · Soil sampling mars 1 - mai 31 Genesis · Results report JUI 1 - juin 30 CooFarms · Answer sustainability assessment fevr. 1 - fevr. 28 EcoFarms · Results report EcoFarms · Results report videocall Juin 30 - juil. 14 CAP · Hand over Charter · Answer supplementary character Charter · Answer · Most evailable period Charter · Answer · Most evailable period |

Figure 12: Farmer's schedule

The questions can be asked during a farm visit, through a phone call or with an online form. Several stakeholders can be in charge on this small data collection (section 1.2.1): investors, other farmers, an external organisation or someone from FEVE. The priority and main challenge in the design of the charter control is to make it as light as possible for the farmers. With this in mind, having someone from FEVE collect the very few data and information needed is the best option. To maximise data coherence, CAP declarations should be collected after they have been processed by the ASP, along with the complementary data.

Like CAP declarations, EcoFarms' data collection is updated annually. The farms assessments conducted through the charter will primarily be used in FEVE's annual impact report (Boulet and De Turckheim, 2024). Therefore, the description and the evolutions of the farms based on the charter will be updated each year.

1.4. Process design and implementation

To summarize, the process includes:

- An annual sustainability assessment, conducted by EcoFarms using the IDEA4 MCA methodology.
- Soil quality measurements every five years, carried out by Génésis
- An annual charter control through the aggregation of data from various sources by FEVE

The overall process and its schedule are presented in the Appendix 6 and will be declined in the next sections.

1.4.1. From the farmer's perspective

As explained above, one of the key objectives in designing this process is to keep it as light as possible for the farmers, so it doesn't become a burden. To do so, the time required from farmers is kept to a minimum (Table 13). Additionally, the most time-consuming task (answering the sustainability assessment questionary) is scheduled during winter, when farmers are generally more available (Figure 12).

1.4.1. From FEVE's perspective

Within FEVE, the monitoring coordinator spends around eight hours per year managing the various interventions on each farm (Table 14). Those tasks are spread over the year even if winter is busier than summer (Figure 13). But pooling the various tasks and steps (Table 7) across all the farms might save up working hours

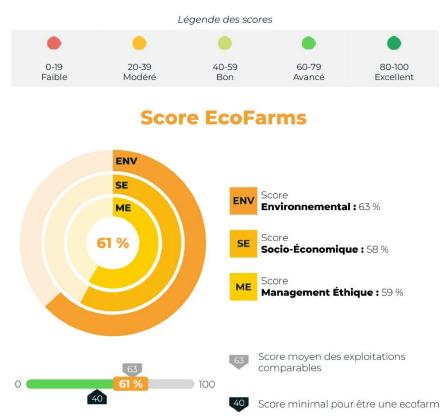
| Which assessment? | FEVE's team task | Time necessary (hours) | Recurrence |
|--|--|-----------------------------------|---|
| Soil quality diagnosis – Genesis | Send farm's information and validate quotations | 0.5 | Every 5 years |
| Soil quality diagnosis – Genesis | Reception of the report – Going through it | 1 | Every 5 years |
| Sustainability assessment – EcoFarms | Send farm's information and validate quotations | 0.25 | Annual |
| Sustainability assessment – EcoFarmsReception of the report – Going through it | | 2 | Annual |
| Results of soil quality diagnosis and sustainability assessment – EcoFarms & Genesis | Videocall: Assist to a result presentation and discuss about the results | 3 1.5 | Every 5 years Annual |
| Charter control – CAPCollect instructed CAPdeclarations and questionsdeclarations & complementary questions | | 0.5 | Annual |
| Charter control | Charter control Use the data available to assess each farm's performance looking the charter's indicators | | Annual |
| Maximal amount of tim with soil quality assess | - | 10.25 | Every 5 years |
| Amount of time needed soil quality assessment | / year / farm – without | 7.25 | 4 years out of 5 |
| Amount of time needed | / year / farm | 7.85 | Annual |
| Total in 2024 (30 farms) |) | 235.5 ²⁷ | Annual |

. Table 14: FEVE's estimated time required to implement the monitoring process

²⁷ One day of wark is 7.5 hours. It is equivalent to 31.4 full working days per year.

| | 2025 | | | | 2026 | |
|-----------------------|--|--|---|---------------------------------|--|-------------------------------|
| Monitoring type | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| Genesis | Genesis • Senc janv. 1 - janv. 31 | farms' informations & Quo | tation signature Genesis • Receipt of th juin 1 - juin 30 | ne report | Genesis • Send f janv. 1 - janv. 31 | arms' informations & Quotatic |
| EcoFarms | EcoFarms • Send farms' déc. 1 - déc. 31 | | ignature arms • Receipt of the repor • mai 31 | t | EcoFarms • Send farms' in déc. 1 - déc. 31 | formations & Quotation signa |
| EcoFarms / Genesis | | | EcoFarms / G juin 30 - juil. 14 | enesis • Results report vide | eocall | |
| Internal deadlines | | Internal deadlines • Act mars 1 - mars 31 | ivity report | Internal dea oct. 1 - oct. 3 | | pact and charter assessment |
| CAP | | | | | CAP • Collect CAP declara nov. 30 - déc. 31 | tions |

Figure 13 : Internal FEVE schedule



Résultats d'évaluation des performances RSEa

Figure 14: Sustainability assessment results of a one year established farm, EcoFarms



Score EcoFarms

Figure 15: Sustainability assessment result of the ceding farmer, EcoFarms

The global monitoring is detailed in the Appendix 6. But it should be outlined that some aspects of the relationship and interactions between FEVE and the farmers, are not detailed in this monitoring process as they fall outside of the scope of the agroecological monitoring. These additional contacts, interactions and collaborations are explained in the Appendix 7.

2. Initial results from a fragmented method deployment

The monitoring process detailed in the previous part (section 1 of the Chapter 3: Results) has been segmented and implemented across several farms. The partial results obtained are detailed in the following sections.

2.1. Two sustainability assessments

The context of the assessment for the two farms differs. The first farm has been established for a year and the assessment focused on the farmer's practices (section 2.1.1). In contrast, the second farm was in process of transitioning to new farmers (with FEVE). The previous farmer remained to facilitate a gradual transition. Therefore, the diagnosis is based on the practices of the previous farmer (section 2.1.1).

2.1.1. Results of farmers established with FEVE

The sustainability assessment was done a year after the farmers' establishment. The results are aggregated under three pillars (Figure 14). When the grade is higher than 40, it is considered as a good result. So, the results of the farm are good. When looking at the detailed results (Appendix 8), three groups have a weak or moderate scoring: "Living standards and financial security" (12/100), "Collective process" (39/100) and "Training, commitments and sustainability strategy" (26/100). These weaknesses assessed on a one-year-old farm are not very surprising. They are noticed, considered and may become a worry if it doesn't get better within few years.

2.1.1. Results of the grantor

During this farm transmission, the previous farmer (grantor) and the new farmers worked together on the farm for a few months to facilitate the transition. The sustainability assessment of the farm is based on the practices of the outgoing farmer. This process brought up subject that hadn't previously been discussed. The new farmers gained a better understanding of the farm and how it was managed. This assessment is useful for the established farmers to identify the management practices that they want and can develop and the time scale to do so. The overall results are good, except on the ethical management pillar (Figure 15). This low grade is mainly due to the absence of a proper sustainability strategy.

Overall, both farmers found the process to be time-consuming and lacking concrete benefits for them. Although some recommendations and improvement suggestions were made, they were not personalised enough. For the farm assessed right before the establishment of the new farmers, the assessment process facilitated a deeper understanding of the history of the farm and its functioning through extensive discussions with the outgoing farmer.

| Score global | Biodiversité | Climat | t | Eau | Fertilité |
|-----------------------------|------------------|-----------------------|-----------------|--------------------------|-----------------------|
| 63 BON | 54 MOYEN | 50 MOYEN | | 84 BON . | 72 |
| Carbone organique total | (BON) 88/100 | Carbone biodisponible | (MOYEN) 59/100 | Équilibre des formes de | ca (DÉGRADÉ) 38/100 |
| Équilibre des formes d'azot | te MOYEN 41/100 | Diversité bactérienne | BON 69/100 | Risque d'émission de pro | otox (MOYEN) 56 / 100 |
| Disponibilité en oxygène | (DÉGRADÈ) 22/100 | Érosion hydrique | BON 92/100 | Réserve maximale en ea | u (BON) 75 / 100 |
| Salinisation | BON 100 / 100 | Nitrates | (BON) 100 / 100 | Cuivre total | BON 89/100 |
| Nickel total | BON 94/100 | Chrome total | BON 93/100 | Cadmium total | BON 100 / 100 |
| Plomb total | BON 89/100 | Zinc total | BON 90/100 | Mercure total | BON 100/100 |

2.2. Some soil quality diagnosis

The main goal of the soil quality diagnosis is to assess its evolution following the establishment of new farmers and changes in farm management. To date, three farms have been sampled between February and April 2024. Four indexes are obtained through the aggregation

Figure 16 : Soil quality assessment of a farm with hazelnut orchards, extract from Genesis



of several indicators (total organic carbon, aquatic erosion...): biodiversity (Appendix 9), climate, water and fertility. The global results of the three farms are good (Figure 16, Figure 18 and Figure 17) but the period was not ideal due to recent weather conditions. Soils were waterlogged and it explains some of the bad results (oxygen availability Figure 16 and Figure 18) and supports the need for a longer period during which soil sampling can be conducted (Figure 12).

The process appears to be very convenient: low time-consuming and the results are easily usable. However, some farmers have expressed reluctance towards Genesis' approach:

- The selection of sampling points and the methodology seem very theoretical and disconnected from the farmers' reality. They would prefer to be involved in the development of soil units and the choice of sampling points.
- The feedback on results consists of raw data. While some discussions may follow, the feedback is not tailored to the farmers' practices or the farm's context. Without specific agro-pedological skills to interpret the results, farmers may struggle using them.

2.3. Some of the farms through the charter

As none of the farm have completed the entire process yet, no complete charter monitoring is done. However, one farm has undergone the sustainability assessment (2.1.1) and have provided its CAP declarations. These are the main sources of data to assess the charter (Table 12). This farm features multi-crop and livestock farming (cattle and geese), on-farm cottage and food processing. Some additional characteristics are presented in the Table 15.

The results and the farm's profile according to the charter are good (Table 16, Table 17 and Table 18). However, among the agronomic results, two indicators requiring minimal thresholds have not yet been met: organic certification and minimal agroecological area (Table 16). Additionally, the farmers' income does not reach the minimal wage (Table 17). These points are noticeable and require a particular monitoring.

Table 15: Farm's descriptive indicators

| Indicator | Total area (ha) | Permane nt pastures area (ha) | Temporar y pastures area (ha) | Uncultiva ted land (ha) | Crop poduction (ha) | Cereal crops (ha) | Forest area (ha) | Cattle size (numbe r of animals) |
|---------------------------|-----------------------|--|-------------------------------------|-------------------------------|---------------------------|-------------------------|------------------------|--|
| Location of the data | CAP | CAP | CAP | CAP | CAP | CAP | CAP | CAP |
| Actualisation of the data | Annual | Annual | Annual | Annual | Annual | Annual | Annual | Annual |
| Result | 48,56 | 18,16 | 24,07 | 0 | 6,33 | 6,33 | 0 | 35,6 |

Table 16: Results of the chart assessment, agronomy indicators (part 1)

| Charter | Soil cons | Soil conservation | | | | Limit chemical inputs | Diversi | fication | | |
|----------------------------------|-----------------------------------|--|----------------------------|--------------------------------|---|---|--|---|---|---|
| Charter | Maxim al ground cover | Diversific ation and lengtheni ng of the rotations | Limit mechar tillage | nical | Combinati on livestock and crops | Organic certificati on (5 years after establish ment) | Divers ify crop rotati ons and livest ock | Diver sify speci es & variet ies withi n a rotati on | Perenn ial and annual species | Grow rustic and patrimo nial species |
| Indicator | Ground cover propor tion | Medium rotation length (year) | Ploug h area | Direct seedli ng area | Associatio n livestock and crops | Organic certificati on | At least 2 differ ent crop rotati ons | Numb er of activit ies on the farm | Propor tion of annual species within the total surface | Presenc e and preserva tion of local breed |
| Location of the data | EcoFar ms | Question ary | EcoFar ms | EcoFar ms | CAP - Ecofarms | САР | САР | САР | САР | EcoFarm s |
| Actualis ation of the data | Annual | Annual | Annua I | Annua I | Annual | Annual | Annu al | Annu al | Annual | Annual |
| Result | 95% | 3 | 0 | 5,5 | Yes | No | Yes | 4 | 0 | Yes |

Results of the chart assessment, agronomy indicators (part 2)

| Adaptati on to the terroir | Animal well-being | | | Biodiversi ty preservati on | Areas of ecologi cal interes ts | Water management | | | Circular approac h | |
|---|---|--|---|---|--|---|---|---|------------------------------------|---|
| Species adapted to the terroir and climate conditio ns | Respect of physiolog ical and behaviou ral needs | Disease s preventi ve approac hes | Prioritiz e outdoo r | At least 10% agroecolo gical surfaces | Protec ted areas at stake | Maximi se water capture (hedge s, cover crops, tillage .) | Maxim ise water storag e (organ ic matter) | Limit water consump tion (adapted species) | Preserv ing water quality | Maxima l use of byprod ucts and waste reducti on |
| Choice of species adapted to the terroir | Livestock unit / hectare | Use of veterina ry treatme nts | Proport ion of their lives animals spent in grassla nds | Proportio n of agroecolo gical surfaces | Natura 2000 area ZIEE surfac e area ZNIEFF surfac e area Wetlan d area | Maximi se water catchm ent | Soil organi c matter rate | Producti on adapted to water availabilit y | Water quality | Waste and byprod ucts gestion |
| Questio nary | САР | EcoFar ms | EcoFar ms | САР | Intern al | САР | Génési s | | Génési s | EcoFar ms |
| Annual | Annual | Annual | Annual | Annual | | Annual | 5 years | | 5 years | Annual |
| No | 0,843002 605 | Yes | 60% | 0.27 | 0 | No | ? | Yes | | 52,5/10 0 |

Table 17: Results of the chart assessment, social indicators

| Charter | Independance | | Gouvernance | Labour, capital and income | Knowledge sharing | | Easy transmission |
|---------------------------|--|--|---|---|---|---|--|
| Charter | Gestion and decision autonomy | Limiting dependence on external supplies and services | Governance system defined collectively | Decent and fair income for all workers | Sharing beyond the perimeter of the farm | Disseminate informations on the measurmeents of sustainable indicators | New farmer arrival easy thanks to the organisation and structure |
| Indicator | Gestion and decision autonomy | Autonomy of the farm | Collective definition of the governance and decision- making | Decent income (more than 1 minimal wage) | Sharing beyond the perimeter of the farm | Impact measurements and communication | Potential for transferring the farm |
| Location of the data | EcoFarms | EcoFarms | EcoFarms | EcoFarms | EcoFarms | EcoFarms | Internal |
| Actualisation of the data | Annual | Annual | Annual | Annual | Annual | Annual | Annual |
| Result | Yes | Yes | Yes | No | No | Yes | Good |

Table 18: Results of the chart assessment, societal indicators

| Charter | Strong | g environmenta | l impact | Territory integration | | | |
|---------------------------|--|---|--|--|---|---------------------|-------------------------------|
| Charter | Limit fossil energies | Limit non recyclable and non renewable materials | Maximise responsible investment (buildings, machinery) | Sharing knowledge within the region | Local networks (purchase & distribution) | | on of supply methods |
| Indicator | Production of renewable energies at the farm | Implementing measures to limit the use of non- renewable materials | Responsible investments | Agritourism acticity | Short- distance sales (<80 km + direct consumption) | Supply diversity | Sales outlets diversity |
| Location of the data | EcoFarms | EcoFarms | EcoFarms | EcoFarms | EcoFarms | Questionary | Questionary |
| Actualisation of the data | Annual | Annual | Annual | Annual | Annual | Annual | Annual |
| Result | No | Yes | No | Yes | 30% | No | No |

| | Patrimonial job | | | |
|---------------------|---|---|--|--|
| Products quality | Commercialisation of finished products in short circuit | Visual impact of the activity | | |
| Quality products | On-farm product transformation | Integration of buildings in the landscape | | |
| EcoFarms | EcoFarms EcoFarms | | | |
| Annual | Annual Annual | | | |
| Yes | Yes Yes | | | |

The transmission of the CAP declarations is not time-consuming; however, some farmers are concerned about the data contained in the document and how FEVE might use it. itial sensitization is needed to clarify that the document contains only declarative information (such as plot surfaces, agroecological infrastructures, crops, etc.) and does not include financial details

Compiling all the results and indicators obtained through this charter verification is valuable to identify potential issues, monitor them, and determine if any additional support or assistance is required.

Chapter 4: Discussion

1. Operational limitations and challenges of the actual monitoring process

1.1. Farmers and our partners

Now that a first version of the monitoring process is designed, it needs to be implemented on the 30 farms that are (or will be) established with FEVE by the end of 2024. It requires time and some ongoing discussions with partners still need to be sort out. Indeed, the way that the assessments and diagnosis were presented by EcoFarms and have not engaged the farmers who struggle to see the direct benefits of these processes. Although their methodologies and ides align with FEVE's sustainability goals, their approach is quite heavy-handed and don't focus on the important points. Nevertheless, they are open to feedback and are keen on adapting their processes to fit the needs of FEVE's farmers.

For the moment, farmers have shown limited interest in the new assessments, partly due to their recent introduction (and the busy periods of spring and summer). This process and associated constraints are not an update from a previous monitoring but completely new, and farmers need time to adapt. Moreover, it is crucial to enhance their understanding and use of these tools to benefit their farm management, otherwise there will never find any interest in the process. To achieve this, it may be necessary to provide interpretation and agronomic advice based on soil analysis results and the farm's context. The sustainability assessment should also include tailored recommendations to address factors that may limit the farm's sustainability.

Initially, the choice of private companies was to streamline the process end-to-end. However, since this is not yet the case, it places additional demands on FEVE's team. For soil analysis, considering a laboratory that offers agronomic advice and results interpretation - while FEVE handles sampling and assessments - could be more effective. Alternatively, training a FEVE staff member to the IDEA4 method and EcoFarms' tools will improve FEVE and farmers interactions and make the data collection easier. EcoFarms excels in IDEA4 development, but better farmer engagement and training could maximize the process's benefits.

Moreover, some farm visits are necessary to understand the stakes and farm management, as explained in the IDEA4 assessment methodology (Zahm et al., 2023): the indicators serve as tools to understand the functioning of the farm and assess it. However, the use of this assessment, the scoring and the recommendations formulated requires a good knowledge of the farming system and common sense. That is why, I believe that the online assessment of the farm sustainability, by EcoFarms is not optimal and sustainable. Similarly, the sampling designs used by Genesis are not ideal, as they do not sufficiently incorporate farmers' knowledge and

experience to determine the most representative areas, nor do they involve direct observation of the fields to identify zones. By engaging with farmers about their soil, challenges, and areas of interest for soil quality measurements, farmers might be more likely to value and utilize the results.

1.2. Our charter and control, a mix of a certification and a public regulation

Going back to the state of the art, where the differences between certifications (section 2.3) and public regulations (section 2.2) are detailed. The process implemented by FEVE can be seen as a blend of both. Indeed, FEVE's farmers are required to adhere to a charter that can be compared to the mandatory nature of public regulations. To establish his farm, if the farmer has no other recourse than FEVE's financing, the associated obligations can be perceived as mandatory. But the establishment with FEVE is done within the framework of voluntary participation and alignment with FEVE's values (i.e. the charter). Unlike public regulations, which are imposed and leave no room for alternatives, FEVE's charter serves as a guiding principle rather than a strict mandate. Nevertheless, the access to agricultural land, eased by FEVE, can be seen as an added value and associated to certifications in this sense.

The monitoring process can be compared to both public regulations and certifications. An external party is tasked with collecting data and assessing the farm and its practice. This process looks like a TPC (section 2.3.2.1), except that it is FEVE itself that ultimately evaluates the farm based on the charter. However, the non-normative nature of the charter sets it apart from traditional TPCs, as it is designed more to guide and inspire rather than to enforce strict compliance.

1.3. FEVE's monitoring: an administrative burden?

Monitoring the farms and ensuring adherence to the charter is a form of control. As presented in the state of the art, in France, Controls are perceived as an Administrative Burden (4.1.1). This burden can be declined in three costs : Learning costs (4.1.1.1), Compliance costs (4.1.1.2) and Psychological costs (4.1.1.3).

- Learning costs are minimal in FEVE's control process. The charter is clearly defined and signed at the establishment of the farm and is included in the lease agreement. Even if the charter evolves, these changes do not apply retroactively to farmers who are already established. Additionally, FEVE's team is readily available to answer any questions about the charter both before and after establishment.
- Compliance costs are higher and represent the main concern raised by farmers during the process. The time required to answer all questions and provide the necessary data for the sustainability assessment is seen as burdensome and unnecessary.
- Psychological costs are more difficult to quantify. However, the farmers who have participated in the process so far have not reported any significant issues. The process was thoroughly explained beforehand, allowing them to ask questions, and the timing and procedures were adjusted to meet their needs. Importantly, farmers understand that there will be no negative consequences as long as they are progressing toward organic certification.

Reducing the time required from farmers seems to be the most significant improvement for streamlining the process. However, this isn't feasible at the moment. Instead, providing results that are genuinely useful to farmers (demonstrating the added value of the process and proving that it is not a waste of time) could significantly lessen the perceived burden.

2. Is small-scale private control sustainable and desirable?

Taking a step back from the implementation and potential amelioration of this method, I would like to emphasize on two aspects of this monitoring process.

2.1. Assessing farm sustainability with unfamiliar method: a fair approach?

The assessments implemented are decided by FEV. Indeed, the IDEA4 indicators and complete soil quality diagnosis differ from FEVE's charter, even though the underlying ideology and principles are the same. Farmers who have been established for some time didn't know about the criteria that are used to monitor and assess their farm and none of them have a say in the assessment grids. Morally, it doesn't seem fair. But the main objective of those assessments is to provide feedback to the investors. Additionally, FEVE monitors the sustainability and functioning of the farms and is able to identify any red flags or areas of concern. FEVE may assist the farmers by leveraging internal skills, seeking help from the community, or directing them to competent organizations. The consequences of the sustainability assessment can't be detrimental to the farmer. As long as it is the case, we may wonder if they need to have a say in the development of this process.

2.2. TPC: a European custom. Why not consider PGS?

FEVE's charter is not very restrictive, so it seems that very few farmers will fall outside its scope. Indeed, one might question whether this monitoring, which can be associated with a TPC (section 2.3.2.1), is truly effective and will significantly impact farm management. Overall, participatory assessments as presented in section 2.3.2 (The variety of private controls associated to the certification) can be an interesting approach for FEVE's farm monitoring and could be considered. Discussions, knowledge sharing, and experience exchanges among farmers are very valuable and a source of progress. However, this would be too time-consuming at present, as farms are scattered across mainland France and travel times are too long. If the network of farms continues to expand and distances between them decrease, having farmers visiting each other's farms to assess compliance with the charter and engage in discussions should be considered.

Conclusion

The mission aimed to design a monitoring process for farms established with FEVE that serves multiple purposes: to inform FEVE's team about farm evolution and potential issues, to provide feedback to investors demonstrating the impact of their investment and to be beneficial for the farmers. The initial challenge was to develop the essential components of the monitoring process and strike a balance between those requirements.

The proposed monitoring process involves using assessment methods such as IDEA4 indicators and soil quality diagnostics. While these methods align with FEVE's needs, on the farmer's side some challenges persist, especially the time commitment required and the lack of immediate added value. Further practical improvements are needed to address these issues, and the methods will require adjustments based on farmers' feedback. Due to the mission's timeline and delays associated with coordinating with external companies, only a few farms have undergone the complete process so far. Consequently, there is insufficient feedback to determine the extent of modifications needed before scaling the process to all established farms. Given the current agricultural sector crisis, introducing new administrative tasks may be

challenging but is necessary due to the growing number of farms and the need to ensure adherence to the charter.

A potential future direction to consider is the implementation of a Participatory Guarantee System (PGS). Although not widespread in France and Europe, research on PGS shows promising results. Integrating such a system could enhance farmer engagement and provide direct benefits from the monitoring interactions, making it a valuable consideration for the future of the monitoring process.

Bibliographie

Agence Bio (2024) Observatoire de la production bio sur le territoire français.

Agence Bio, INAO (2023) Le bio 100% sous contrôle.

Antonin S (2011) L'hiver, période plus calme pour les agriculteurs.

Bathaei A, Štreimikienė D (2023) A Systematic Review of Agricultural Sustainability Indicators. Agriculture 13: 241

Baudinet C, Perez R (2017) Comprendre le stress dû aux contrôles en exploitation agricole: aller vers une normalisation (apaisement) des relations contrôleurs/contrôlés. Cas de l'Ille-et-Vilaine. Agrocampus Ouest

Bezes P, Chiapello È, Desmarez P (2016) Introduction : la tension savoirs-pouvoirs à l'épreuve du gouvernement par les indicateurs de performance. Sociologie du Travail **58**: 347–369

Bockstaller C, Guichard L, Keichinger O, Girardin P, Galan M-B, Gaillard G (2009) Comparison of Methods to Assess the Sustainability of Agricultural Systems: A Review. http://dx.doi.org/101051/agro:2008058. doi: 10.1051/agro:2008058

Boeraeve F, Dendoncker N, Cornélis J-T, Degrune F, Dufrêne M (2020) Contribution of agroecological farming systems to the delivery of ecosystem services. Journal of Environmental Management **260**: 109576

Boisard P, Fermanian J-D (1999) Les rythmes de travail hors norme. Economie et Statistique 111–131

Boiteau P (2016) La paperasse alourdit des semaines déjà bien chargées. Terre-net

Boulet S, De Turckheim E (2024) Les Feves - Rapport d'impact 2023.

Cambridge Dictionary (2024a) Assessment. Campridge Dictionary, https://dictionary.cambridge.org/dictionary/english/assessment

Cambridge Dictionary CONTROL | English meaning - Cambridge Dictionary. https://dictionary.cambridge.org/dictionary/english/control

Cambridge Dictionary (2024b) Certification - BUSINESS ENGLISH. Certification, https://dictionary.cambridge.org/dictionary/english/certification

Carnoye L, Petitimbert R (2023) Le code de la commande publique, un dispositif de performance totale ? Enquête sur l'insertion de critères RSE dans les marchés publics de Nantes Métropole. Revue de l'organisation responsable **18**: 13–28

Carter MR, Gregorich EG (2007) Soil Sampling and Methods of Analysis, CRC Press. CRC Press

Centre d'études et de prospective (2022) La PAC et le travail administratif des agriculteurs : une comparaison France-Espagne. Ministère de l'agriculture et de la souveraineté alimentaire

Chambre d'agriculture de Normandie (2022) PAC 2023 - 2027 : Conditionnalité renforcée des aides.

Chambre d'agriculture de Nouvelle-Aquitaine (2022) Observatoire Régional de l'Installation et de la Transmission - 2021.

Chambres d'agriculture France (2024) Les chiffres clés 2023 de l'agriculture française -Structures, productions, prix, commerce extérieur, environnement. Jeunes Agriculteurs

Cheyns E (2011) Multi-stakeholder Initiatives for Sustainable Agriculture: Limits of the 'Inclusiveness' Paradigm. Governing through Standards. pp 210–235

Code rural (1998) Code rural - Chapitre III : Les labels et la certification. (Article L643-2). Légifrance, https://www.legifrance.gouv.fr/codes/id/LEGISCTA000006152308/1998-07-09

Collet C (2023) Travail administratif : mode d'emploi pour être plus serein | Union Agricole. Réussir - L'Union agricole

Compagnone C, Petit S, Joly N (2015) L'environnement par la réglementation. Transformation dans le métier de conseiller agricole. Activités professionnelles à l'épreuve de l'environnement. Octarès, Toulouse, pp 115–131

Dorville C (2021) Gouvernance des communs de la connaissance: le cas des systèmes participatifs de garantie pour gérer les labels écologiques en France et au Brésil. Université de Montpellier

Durrive L, Daniellou F (2015) L'expérience des normes - Comprendre l'activité humaine avec la démarche ergologique.

FIBL, IFOAM OI (2022) The world of organic agriculture | Statistics & emerging trends 2022. 170–177

Fouilleux È (2012) Vers une agriculture durable ? Normes volontaires et privatisation de la régulation. Développement, alimentation, environnement : changer l'agriculture? pp 301–310

Fouilleux È, Loconto A (2017) Behind the scenes of quality labels: Tripartite regulation and layered markets - From the Europeanization to the globalization of organic agriculture. Revue française de sociologie **58**: 501–531

G. Kilpatrick D (2024) Definitions of Public Policy and the Law. https://mainwebv.musc.edu/vawprevention/policy/definition.shtml

Galan MB, Peschard D, Boizard H (2007) ISO 14 001 at the farm level: Analysis of five methods for evaluating the environmental impact of agricultural practices. Journal of Environmental Management 82: 341–352

Girard N (2024) Renouvellement des générations : l'indépassable plafond de terre de l'installation. Terre de Liens, https://terredeliens.org/national/actu/renouvellement-des-g%C3%A9n%C3%A9rations-lind%C3%A9passable-plafond-de-terre-de-linstallation-20-02-2024/

Gliessman S (2018) Defining Agroecology. Agroecology and Sustainable Food Systems 42: 599–600

GreenFlex A (2023) Baromètre GreenFlex-ADEME de la consommation responsable 2023.

Gyawali AJ, Strickland MS, Thomason W, Reiter M, Stewart R (2022) Quantifying shortterm responsiveness and consistency of soil health parameters in row crop systems. Part 1: Developing a multivariate approach - ScienceDirect. 219:

IDEA4 IDEA4 - IDEA Indicateur de durabilité des exploitations agricoles. https://methode-idea.org/la-methode-et-ses-usages/comprendre-idea4

IFOAM (2024a) IFOAM - Organics International | Home. https://www.ifoam.bio/

IFOAM (2024b) Participatory Guarantee Systems | IFOAM. https://www.ifoam.bio/our-work/how/standards-certification/participatory-guarantee-systems

IFOAM OI Internal Control Systems (ICS) for Group Certification | IFOAM. https://www.ifoam.bio/our-work/how/standards-certification/internal-control

INSEE (2021) Évolution des revenus agricoles et part des subventions – Transformations de l'agriculture et des consommations alimentaires | Insee. https://www.insee.fr/fr/statistiques/7728847?sommaire=7728903#tableau-figure4

Larousse É Définitions : contrôle - Dictionnaire de français Larousse. https://www.larousse.fr/dictionnaires/francais/contr%C3%B4le/18932

Lemeilleur S, Allaire G (2018) Système participatif de garantie dans les labels du mouvement de l'agriculture biologique. Une réappropriation des communs intellectuels. Économie rurale **365**: 7–27

Liu Q, Sun X, Wu W, Liu Z, Fang G, Yang P (2022) Agroecosystem services: A review of concepts, indicators, assessment methods and future research perspectives. Ecological Indicators 142: 109218

Massat F, Bastian J-P, Saillant S (2015) Mission Contrôles en agriculture - Rapport final | Ministère de l'Agriculture et de la Souveraineté alimentaire.

Meinshausen F, Richter T, Blockeel J, Huber B (2019) Group Certification - Internal Control Systems in Organic Agriculture: Significance, Opportunities and Challenges. Research Institute of Organic Agriculture (FiBL), Frick

Mesnel B (2018) Socialiser à la biodiversité à travers la néo-libéralisation de la PAC? Développement durable et territoires Économie, géographie, politique, droit, sociologie. doi: 10.4000/developpementdurable.12715

Mesnel B (2017) Les agriculteurs face à la paperasse. Policy feedbacks et bureaucratisation de la politique agricole commune. Gouvernement et action publique **VOL. 6**: 33–60

Mesnel B (2022) Médiations administratives du verdissement et sélection professionnelle en agriculture : contrastes France-Espagne. Sociologie du travail. doi: 10.4000/sdt.41942

Mesnel B (2023) Les agriculteurs et la légitimation des politiques de transition : une approche par les discours sur la paperasse |. Politix 4: 125–149

Mesnel B (2024) Simplifier les politiques agricoles européennes sans renoncer aux exigences environnementales : une voie étroite à construire. Métropolitiques

Moynihan DP, Herd, Harvey H (2014) Administrative Burden: Learning, Psychological, and Compliance Costs in Citizen-State Interactions | Request PDF. Journal of Public Administration Research and Theory **25**: 43–69

Nijkamp P (1975) A MULTICRITERIA ANALYSIS FOR PROJECT EVALUATION: Economic-Ecological Evaluation of a Land Reclamation Project. Papers in Regional Science **35**: 87–111

ParisTech I-M (2019) Les labels alimentaires ne sont pas votre rayon? Blog de l'ISIGE - MINES Paris

Petit S (2013) « Faire avec » ou « donner du sens » aux normes : le conseil agricole dans un contexte de réglementation de l'agriculture. Pour **219**: 203–210

Ponsan M, Gramond F (2024) Enquête agriculteurs - Résultats / Collectif Nourrir - BVA Xsight - Terranova.

Prévost B (2020) Revendiquer les communs, c'est défendre une rupture radicale. 19-36

Profit.co What are Smart Metrics and why are they Important? Profit.co, https://www.profit.co/blog/kpis-library/what-are-smart-metrics-why-are-they-important/

Remongin X (2024) La documentation officielle de la PAC 2023-2027. Ministère de l'Agriculture et de la Souveraineté alimentaire, https://agriculture.gouv.fr/documentation-officielle-pac

Remongin X (2022) Paiements découplés – Le « paiement vert ». Ministère de l'Agriculture et de la Souveraineté alimentaire, https://agriculture.gouv.fr/paiements-decouples-le-paiement-vert

Rossing WAH, Zander P, Josien E, Groot JCJ, Meyer BC, Knierim A (2007) Integrative modelling approaches for analysis of impact of multifunctional agriculture: A review for France, Germany and The Netherlands. Agriculture, Ecosystems & Environment **120**: 41–57

Schaller N (1993) The concept of agricultural sustainability - ScienceDirect. Agriculture, Ecosystems & Environment 46: 89–97

United Nations (2015) THE 17 GOALS | Sustainable Development. https://sdgs.un.org/goals

Valiorgue B (2023) La durabilité agricole ou l'enjeu du siècle. Agriculture et alimentation : la durabilité à l'épreuve des faits

Van Der Werf H, Petit J (2002) Évaluation de l'impact environnemental de l'agriculture au niveau de la ferme. Comparaison et analyse de 12 méthodes basées sur des indicateurs. Le Courrier de l'environnement de l'INRA 121–133

Volonté paysanne du Gers (2012) Analyses de sol : Faire ses prélèvements au début du printemps.

Xicluna P (2023) La conditionnalité des aides PAC. Ministère de l'Agriculture et de la Souveraineté alimentaire, https://agriculture.gouv.fr/la-conditionnalite-des-aides-pac

Zahm F, Girard S, Alonso Ugaglia A, Barbier J-M, Boureau H, Carayon D, Cohen S, Del'homme B, Gafsi M, Gasselin P, et al (2023) La méthode IDEA4 - Indicateurs de Durabilité des Exploitations Agricoles. Principes & guide d'utilisation. Evaluer la durabilité de l'exploitation agricole.

Appendices

Appendix 1 : Fermes En ViE agroecological charter²⁸

Préambule

La mission de Fermes en Vie est d'accélérer la transition agroécologique. FEVE accompagne des agriculteurs dans leur installation et le déploiement d'une agriculture productive :

- Respectueuse des ressources et de leur renouvellement, assurant l'avenir des prochaines générations
- Inscrite de manière durable dans le territoire et y exprimant pleinement son rôle structurant
- Produisant une alimentation saine et accessible à tous.

Cette Charte explicite les engagements que prennent ses signataires (les "Signataires") pour atteindre ces objectifs. Cette charte est organisée en trois parties, indissociables et complémentaires, autour des enjeux agronomiques, sociaux et sociétaux de la transition agroécologique.

I. Une démarche agronomique

1. Préservation des sols

L'entretien, ou la restauration, de la fertilité biologique, physique et chimique des sols est fondamental. Cela passe à minima par :

- Une couverture maximale des sols
- Un allongement et une diversification des rotations
- Un travail mécanique des sols minimal
- Une association culture-élevage, avec présence d'au moins une espèce herbivore afin de valoriser au mieux la biomasse et faciliter le bouclage des cycles.

2. Limitation des intrants de synthèse

Les modes de production adoptés doivent permettre la suppression des intrants de synthèse dans la conduite des fermes. A ce titre, les signataires s'engagent à respecter le cahier des charges de l'agriculture biologique dans un délai raisonnable, et ne pouvant dépasser 5 ans à compter de la signature de la Charte.

3. Diversification

II. Une dimension sociale

Independance

Les signataires sont autonomes en termes de gestion et de prise de décision. Ils limitent leur dépendance aux approvisionnements et services extérieurs, en particulier s'ils ne sont pas locaux et/ou issus de ressources non renouvelables.

2. Gouvernance

Les signataires définissent de manière collective, le mode de gouvernance de leur ferme. Ils sont particulièrement attentifs aux relations humaines et se font accompagner par des tiers quand cela est nécessaire.

3. Travail, capital et revenus

Les signataires définissent de manière collective, la répartition du travail, du capital et des revenus de la ferme. La transformation à la ferme et la maîtrise des circuits de commercialisation sont des outils à privilégier afin d'atteindre un niveau de revenu décent et équitable pour tous les travailleurs.

4. Partage des connaissances

Les connaissances, savoirs-faire et expériences sont largement partagés par les signataires (collaboration, formation...) au-delà du périmètre de la ferme. A cette fin, les signataires s'engagent dans la mesure du possible à enregistrer et diffuser les informations permettant de mesurer et communiquer les impacts agroécologiques, sociaux et économiques de leur ferme.

5. Une transmission facilitée

Les Signataires pensent à la transmissibilité de leur exploitation afin d'y maintenir une activité agricole pérenne. L'organisation de la ferme et sa structuration juridique permettent ainsi l'arrivée de nouveaux porteurs de projets et le départ d'exploitants en place dans de bonnes conditions. D'éventuels agrandissements de la ferme, par acquisition ou mises à dispositions, devront être raisonnés en fonction des possibilités de transmission de la ferme à terme. La diversité des espèces cultivées et élevées est essentielle pour maintenir la bonne santé de l'écosystème sur la ferme. Les signataires cherchent donc à :

- Diversifier les assolements et les types d'élevage
- Associer plusieurs espèces/variétés au sein d'un même assolement
 - Associer cultures pérennes et cultures annuelles
 Cultiver/élever des espèces rustiques et/ou patrimoniales (maintien de la diversité génétique)

4. Adaptation au terroir

Les signataires privilégient les espèces bien adaptées au terroir, aux conditions climatiques locales et à leur évolution, afin de minimiser les interventions et apports extérieurs pour maintenir la bonne santé des cultures/des élevages.

Bien-être animal

Les signataires respectent les besoins physiologiques et comportementaux des animaux élevés. Ils leur évitent toutes souffrances inutiles, se préoccupent de leur confort et portent une attention particulière à leur alimentation. Les signataires adoptent une approche préventive de la santé des cheptels sans traitement systématique. Les modes de production sont extensifs et privilégient le plein air.

6. Gestion de la biodiversité

Le maintien de la biodiversité est essentiel à la bonne santé des écosystèmes dont l'agriculture dépend. Chaque ferme se donne un objectif d'au moins 10% de sa surface dédiée aux infrastructures agroécologiques hébergeant cette biodiversité (haies, bois, parcelles agroforestières, mares et cours d'eau...).

7. Gestion de l'eau

L'eau est une ressource de plus en plus critique. Les signataires cherchent donc à en maximiser la captation (haies, couverts permanents, travail des sols réduit...), le stockage (taux de matière organique dans les sols...), à en limiter la consommation (espèces adaptées, moyens techniques appropriés...) et en préserver la qualité (épuration écologique, respect des chargements, maîtrise des épandages...).

8. Approche circulaire

Chaque déchet produit par un atelier doit, dans la mesure du possible, pouvoir être utilisé comme intrant pour un autre atelier sur la ferme, ou à défaut sur une autre exploitation localement. La ferme doit tendre à supprimer la production de tous déchets ultimes (non recyclables).

III. Une dynamique sociétale

1. Un impact environnemental fort

Le mode d'agriculture défendu par les signataires doit contribuer de manière forte et visible aux enjeux environnementaux. Leurs fermes permettent ainsi de préserver les ressources et en particulier elles :

- Contribuent à la captation du CO2 et son stockage dans la matière organique des sols et des cultures pérennes
- Limitent le recours aux energies issues, sous toutes leurs formes, et privilegier les alternatives renouvelables
- Limitent le recours aux matériaux non recyclables/non renouvelables
- Agissent sur les conséquences indirectes de leurs activités. Les investissements, en particulier en termes de matériels et de bâtiments, tiennent ainsi compte des enjeux environnementaux : bâtiments éco-construits, machines plus économes en énergie...

2. Une intégration au territoire

Les signataires travaillent en priorité avec les acteurs de l'écosystème local. Ils privilégient les achats et la commercialisation en circuits courts et la diversification des modes d'approvisionnement et de vente avec une juste rémunération des parties prenantes. Cela favorise le maintien d'une économie locale dynamique et un accès à des produits de qualité aux populations environnantes.

3. Une alimentation de qualité

Les signataires accordent le plus grand niveau d'attention à la qualité de leurs produits, de la production dans les champs jusqu'à la commercialisation, en passant par les processus de transformation.

4. Un rôle patrimonial

L'agriculture façonne les paysages. Les signataires intègrent cela dans leurs réflexions sur l'aménagement de leur ferme. Ils sont attentifs à l'impact visuel de leur activité et entretiennent les infrastructures ayant un intérêt esthétique et/ou culturel.

²⁸ https://www.feve.co/la-charte-fermes-en-vie

Clarifier, simplifier et stabiliser le cadre réglementaire

R1. Publier sans délai dans chaque département une carte des cours d'eau déjà répertoriés R2 Mener localement un travail de concertation pour vulgariser ce que sont les travaux d'entretien courant réalisables sur les cours d'eau sans procédure préalable......25 R3. Ne faire suivre que d'un avertissement les constats d'infraction à la police de l'eau R4. Actualiser régulièrement la cartographie provisoire des cours d'eau après un processus S'assurer au plus tôt que les dispositifs de la PAC applicables en 2015 sont portés à la R5 connaissance des agriculteurs avant qu'ils ne fassent l'objet de contrôles à incidence financière.....

Rechercher un allègement de la pression de contrôle sur place, et mieux proportionner les suites à la gravité de l'infraction

R6 La mission recommande, chaque fois que cela est possible, de remplacer le contrôle Mettre à disposition les outils d'analyse permettant de mieux cibler les dossiers **R**7 Réaliser les efforts nécessaires permettant d'abaisser le taux de contrôle sur place des R8. R9. Valoriser les démarches de certification des exploitations agricoles qui permettent de R10. Rationaliser les contrôles nitrates, en comptabilisant un même contrôle à la fois au R11. Ne pas concentrer trop de contrôles relevant de domaines différents sur les mêmor R12. Commencer plus tôt les contrôles sur place SURFACE, de manière à détendi pression du calendrier R13. Décider que les contrôles de re-performance ne pourront pas avoir de conséq R19. Organiser dans chaque département une réunion annuelle de début de campagne pour financière négative pour les agriculteurs.....

R15. Recueillir auprès des organisations professionnelles agricoles et des contrôle R20. nécessaire, à leur révision

Structurer aux niveaux national et local l'organisation de l'activité de ce sur place

de département, qui nomme un coordonnateur.

R17. Mettre en réseau la caisse de MSA et la chambre d'agriculture avec l'ensemt corps de contrôle, afin de développer l'échange d'information sur les agriculteurs en Améliorer la préparation et le déroulement des contrôles sur place de fragilité.....

Appendix 2 : List of recommendations to limit psychological costs of the controls, for farmers and controllers, in France. From a deputy of Ariège, Frédérique MASSAT (Massat et al., 2015) and from a study done by Baudinet Chrystel and Perez Rachel as part of the Ille-et-Vilaine departmental plan of improvement of controls (Baudinet and Perez. 2017)

services réalisant des contrôles en exploitation agricole dans les différents domaines, permettant d'identifier, en fin de campagne, les points qui font difficulté lors des contrôles...34 présenter les programmes de contrôle, et les éventuelles évolutions réglementaires, sous R14. Généraliser les protocoles quadripartites et inciter les Procureurs à y prévoir l'égide du préfet, avec la profession agricole et les services réalisant des contrôles en Organiser annuellement des actions de communication destinées aux agriculteurs, en y R21. Organiser annuellement au niveau national une réunion permettant de tirer du bilan des campagnes de contrôles des propositions en terme de progrès dans les différents domaines..... 35 R22. Faire de l'organisation des contrôles sur place dans les exploitations agricoles l'objet

| R23. Lorsque la réglementation le permet, faire preuve de souplesse dans la fixation de la date des contrôles |
|---|
| R24. Généraliser l'information donnée à l'agriculteur par écrit, et lors de la prise de rendez- vous, sur les points qui seront contrôlés ainsi que, le cas échéant, sur les documents qu'il devra présenter au contrôleur lors de sa visite sur l'exploitation |
| R25. Développer la formation au savoir-être dans le parcours des contrôleurs36 |
| R26. Insérer un module de sensibilisation aux contrôles dans la formation initiale des futurs agriculteurs |
| R27. Réaliser des contrôles à blanc, et en rendre compte dans la presse professionnelle 36 |
| R28. Mobiliser le réseau des conseillers des organisations professionnelles agricoles, dont les chambres d'agriculture, afin d'accompagner les agriculteurs par des actions de formation et des conseils adaptés |
| R29. Ecrire (ou actualiser) dans tous les départements avec la profession agricole une charte des contrôles pour partager les bonnes pratiques qui facilitent la réalisation des contrôles37 |
| R30. Dans le domaine de l'environnement, comme dans les autres domaines, réaliser sans arme les contrôles sur les exploitations agricoles |
| R31. Conclure tout contrôle par la remise d'un document permettant que l'agriculteur comprenne la nature des non conformités qui ont été relevées sur son exploitation |
| R32. Lorsqu'une infraction relevée est susceptible de donner lieu à l'établissement d'un procès-verbal, en informer l'auteur de l'infraction de vive voix chaque fois que c'est possible.3' |

Conforter le respect dû au contrôleur

R33. En cas de violence, faire en sorte qu'un contrôleur agressé reçoive un soutien explicite, tant de sa hiérarchie de proximité, que des autorités incarnant l'État (préfet, ministre).

R34. Condamner unanimement et sans réserve ces comportements, heureusement très marginaux, à la fois par les représentants de l'État, par les élus et par l'ensemble des représentants agricoles 38

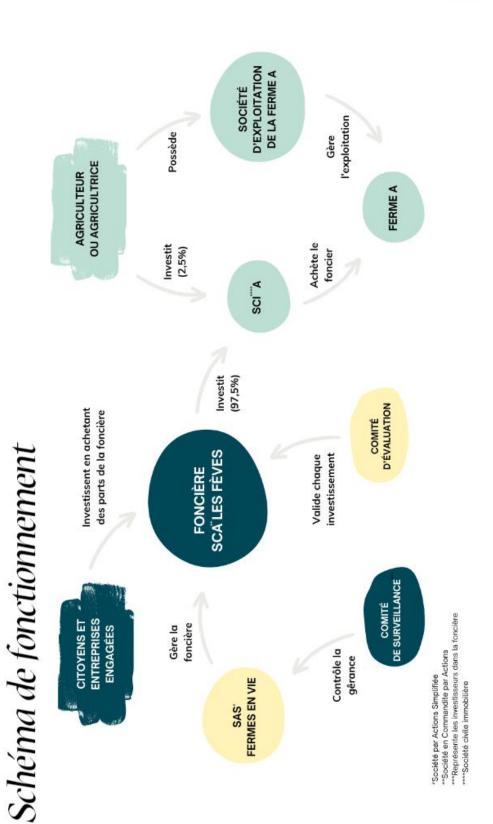
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| Long-terme | Moyen terme | | | | | | |
|---|---|--|---|--|--|-----------|--|
| Simplification de la réglementation | Mise en place de formations au service du contrôle En formation initiale des exploitants (nocaliss et interventions sur les contrôles en centres de formation) En formation contrôle des exploitants (aisance à l'oral) et des contrôleux (assertivité) | Renføreer la communication sur les contrôles : globale (intérét, objectifs, résultats) et spécifique (modalites, procédures) | Renforcer l'accompagnement des exploitants en annout et avai des contrôles (formations, accompagnement individuel ou collectif) | | Copie de tous les documents nécessaires au contrôle laissée à l'exploitant à la fin du contrôle | Comment ? | Appropriation des contrôles par les exploitants |
| État, Union européenne | Lyces agricoles, centres de formation agricoles, en partenariat avec les corps de contrôles et centre de gestion | Médias agricoles et généraux, OPA, Corps de contrôles | Groupes de développements, Chambre d'Agriculture, Syndicats, Centres de gestion, en partenarial avec les corps de contrôle | | Corps de contrôles | Par qui ? | es par les exploitants |
| Anchioration de l'accessibilité des procédures de recours par les exploitants en ne bloquant le versement que de la partie des aides concerne par la pénalité éventuelle | | Mise en place de banques de travail | Faciliter la disponibilité des exploitants : système de remplacement | | Contrôle commenté sur chaque point de vérification | Comment ? | Rendre Fagriculteur acteur du contrôle |
| État, Union européenne | | Agriculteurs, éventuellement supervisés par OPA | OPA, agriculteurs | | Contrôleur | Par qui ? | teur acteur du ôle |
| Mise en place de visites d'accompagnement et d'un munico vert permettual le suivi des exploitations en difficulté tout en maintenant une veille réglementaire | | Simplification des documents de contrôle et notanment de lettr rédaction | OPA, agriculteurs Améliorer la coordination des contrôles | Rendre systématique le premier contact l'éléphonique, selon guide (suppose un accés aux coordonnées des exploitants) | Harmonisation et amélioration des courriers de prévenance | Comment ? | Amélioration de la procédure des contrôles |
| OPA | | Éat | DDTM, ensemble des corps de contrôle | Contrôleurs, agriculteurs | Corps de contrôle | Par qui ? | lure des contrôles |
| | En marge du controle ; encouragement de l'échange entre contrôleurs et entre agriculteurs | Durant le contrôle : accueil du contrôle dans une pièce neutre et équipée, hors des pièces d'habitation | Renforcement de la distinction professionnel/personnel : | | Intégration d'un temps de présentation au célulu du contrôle puis d'un temps d'échange en cours de contrôle | Comment? | Amélioration de la relation contrôleur |
| | Agriculteurs, OPA, contrôleurs, corps de contrôle | Agriculteurs, aidés financiérement par collectivités | Agriculteurs, contrôleurs, corps de contrôles, OPA | | | Par qui ? | contrôleur-agriculteur |
| | | | | Planification des contrôles respectant des horaires professionnels (sauf accord ou incompatibilité avec le contrôle) | Assurer un retour systématique sur le contrôle effectué par courrier, que celui-ci fasse l'objet de pénalités ou non | Comment? | Accruître la considération du travail de l'exploitant |
| | | | | Contrôleurs, agriculteurs | Contrôleurs, corps de contrôle | Par qui ? | ation du travall de tant |

Appendix 3 : Comparison and conditions to get green payment subsidies between the 2014-2020 CAP and 2023-2027 CAP(Chambre d'agriculture de Normandie, 2022)

| | Règlement France 2014-2022 Conditionnalité / Verdissement | Règlement UE PAC 2023-2027 Conditionnalité |
|------------------------------------|---|--|
| | Maintien des prairies permanentes : le ratio régional de surface en prairies permanentes sur la SAU est calculé chaque année et comparé au ratio de l'année de référence 2012. | Maintien des prairies permanentes : le même ratio régional est calculé et comparé à l'année de référence 2018. Le seuil de 5% de dégradation demeure et entraîne les mêmes conséquences. |
| BCAE 1 (ancien verdissement) | S'il se dégrade de plus de 5 % dans une région, les agriculteurs de celle-ci ne sont plus autorisés à retourner leurs prairies. S'il se dégrade de plus de 2,5 % dans une région, les agriculteurs de celle-ci ne peuvent retourner leurs prairies qu'après obtention d'une autorisation de l'administration. Les surfaces conduites en agriculture biologique sont exemptées. Des dérogations existent (JA, Agridiff). | Par contre, le seuil de déclenchement du régime d'autorisation est abaissé à 2 % de dégradation du ratio. Toutes les exploitations sont concernées par cette mesure (agriculture biologique ou non). A ce stade, les dérogations ne seraient pas maintenues. |
| BCAE 2 | - | Protection des zones humides et des tourbières, à mettre en œuvre d'ici 2025, la France envisagerait une mise en place en 2024. Il s'agit d'interdire certaines pratiques, non encore définies. |
| BCAE 3 | Interdiction de brûlage des résidus de cultures, sauf dérogation préfectorale. | Interdiction du brûlage du chaume, sauf pour des raisons phytosanitaires. |
| BCAE 4 | Entretien d'une bande tampon ≥ 5 m le long des cours d'eau, suivant une carte de référence nationale. Interdiction de l'usage d'intrants sur ces bandes tampons et liste de couverts interdits. Certaines pratiques agricoles sont interdites. Exemption pour les canaux d'irrigation et autres canaux aménagés. | Bandes tampon le long des cours d'eau : En plus des obligations actuelles, les dérogations liées aux autres cours d'eau disparaissent. Ainsi, les canaux d'irrigation, fossés et cours d'eau temporaires seraient bordés d'1 mètre de bande tampon (contre 5 m pour les « cours d'eau ex BCAE 1 »). Sur ces nouveaux cours d'eau, il s'agirait de bandes avec interdiction d'intrants, possibles à cultiver (san fertilisant et sans produit phytosanitaire). |
| BCAE 5 | Interdiction de travail des sols gorgés d'eau ou inondés. Limitation du labour dans les parcelles en pente. | Gestion du travail du sol réduisant les risques d'érosion. Reconduction des règles actuelles. |
| BCAE 6 | En zones vulnérables aux nitrates, présence d'une couverture végétale parmi une liste de couverts avec des dates d'implantation et de destruction. | Interdiction des sols nus pendant des périodes sensibles. Reconduction des règles actuelles. |
| BCAE 7 (ancien verdissement) | Date limite de semis des jachères Exploitation entre 10 et 30 ha de terres arables : • ≥ 2 cultures différentes. • Et 1 ^{ère} culture ≤ 75 % des terres arables. Exploitation ≥30 ha de terres arables : • ≥ 3 cultures différentes. • Et 1 ^{ère} culture ≤ 75 % des terres arables : • ≥ 3 cultures différentes. • Et 1 ^{ère} culture ≤ 75 % des terres arables. • Et 1 ^{ère} culture ≤ 75 % des terres arables. • Et 1 ^{ère} culture + 2 ^{ème} culture ≤ 95 % des terres arables. | Il s'agit d'une transformation de la règle de diversification des assolements du verdissement. La rotation doit être assurée sur les terres arables (à l'exception des cultures immergées), par : la validation d'au moins 2 points sur un barème parallèle à celui de l'écorégime, incitant à diversifier ses assolements sur l'année, en privilégiant les protéagineux, les prairies temporaires ou d'autres cultures de diversification. OU, dans certains cas particuliers où ce barème ne serait pas adapté au système d'exploitation, assurer une couverture hivernale totale des sols. L'agriculteur le choisit dans sa déclaration annuelle. * Dérogations possibles pour : Les exploitations présentant au moins 75 % de terres arables dédiées à la production d'herbe et de fourrages herbacés et/ou de légumineuses et/ou de jachère. |

| | Règlement France 2014-2022 Conditionnalité / Verdissement | Règlement UE PAC 2023-2027 Conditionnalité |
|------------------------------------|--|--|
| | | d'herbe ou d'autres fourrages herbacés et/ou à la production de riz. 3. Les exploitations de moins de 10 ha de terres arables. 4. Les exploitations conduites en agriculture biologique. |
| BCAE 8 (ancien verdissement) | Équivalent d'au moins 5 % des terres arables en Surfaces d'Intérêt Écologique (SIE): fixatrices d'azote (sans produits phytopharmaceutiques). Dérobées. Miscanthus. Taillis à courte rotation. Surfaces en agroforesterie (aidées dans le cadre de la PAC). Surfaces boisées (aidées dans le cadre de la PAC). Jachères mellifères. Jachères mon mellifères. Bandes tampon. Bordures de champ. Bandes le long des forêts. Arbres isolés. Arbres isolés. Haies. Bosquets. Mares. Fossés. Murs traditionnels. La future BCAE 8 intègre également les règles de l'actuelle BCAE 7 (maintien des particularités topographiques): maintien des haies, bosquets, mares et règles inhérentes au contrôle de cette disposition. Absence de taille des haies et des arbres entre le 1^{er} avril et le 31 juillet inclus sauf cas dérogatoires prévus. | Uhe part minimale de surfaces est consacrée aux éléments et surfaces non productifs. Les surfaces non productives ne doivent, comme leur nom l'Indique, pas comporter de production. Cela exclut les surfaces en cultures dérobées, les cultures fixatrices d'azote, le miscanthus, la silphie, les taillis à courte rotation, les bordures de forêt avec production et les surfaces en agroforesterie. Les nouveaux éléments et surfaces non productifs retenus sont : jachères mellifères : 1 m² = 1,5 m². Jachères non mellifères : 1 m² = 1 m². Bandes tampon, bordures de champ ou de forêts, sans production : 1 ml = 9 m². Arbres siolés : 1 arbre = 10 m². Arbres siolés : 1 arbre = 10 m². Arbres siolés : 1 m² = 1,5 m². Bosquets : 1 m² = 1,5 m². Bosquets : 1 m² = 1,5 m². Bosquets : 1 m² = 1,5 m². Mares : 1 m² = 1,5 m². Mares : 1 m² = 1,5 m². Kossés non maçonnés : 1 ml = 10 m². Murs traditionnels : 1 m = 1 m². Les seuils d'équivalents évoluent également : ≥ 4 % des terres arables de l'exploitation doivent être consacrés à ces éléments et surfaces non productifs. OU ≥ 3 % des terres arables de l'exploitation doivent être consacrés à ces éléments et surfaces non productifs. OU ≥ 3 % des terres arables de l'exploitation doivent être consacrés à ces éléments et surfaces non productifs. E à condition d'avoir aussi un équivalent ≥ 4 % des terres arables en des cultures dérobées (avec un coefficient 1), cultivées sans utilisation de produits phytosanitaires pour atteindre un total ≥ 7 % des terres arables de l'exploitation. * Dérogations possibles pour: Les exploitations présentant au moins 75 % de terres arables dédiées à la production d'herbe et de fourrages herbacés et/ou de lágumineuses et/ou de jachère. Les exploitations présentant au moins 75 % de terres arables de d |
| BCAE 9 (ancien | Les prairies permanentes dites sensibles, situées dans les périmètres Natura 2000 sont interdites de retournement. | Interdiction de labourer des prairies sensibles Natura 2000. Il s'agit d'une reprise de la règle du verdissement avec le nouveau périmètre Natura 2000. |
| verdissement) | L'agriculture biologique est exemptée. | L'exemption agriculture biologique est supprimée. |



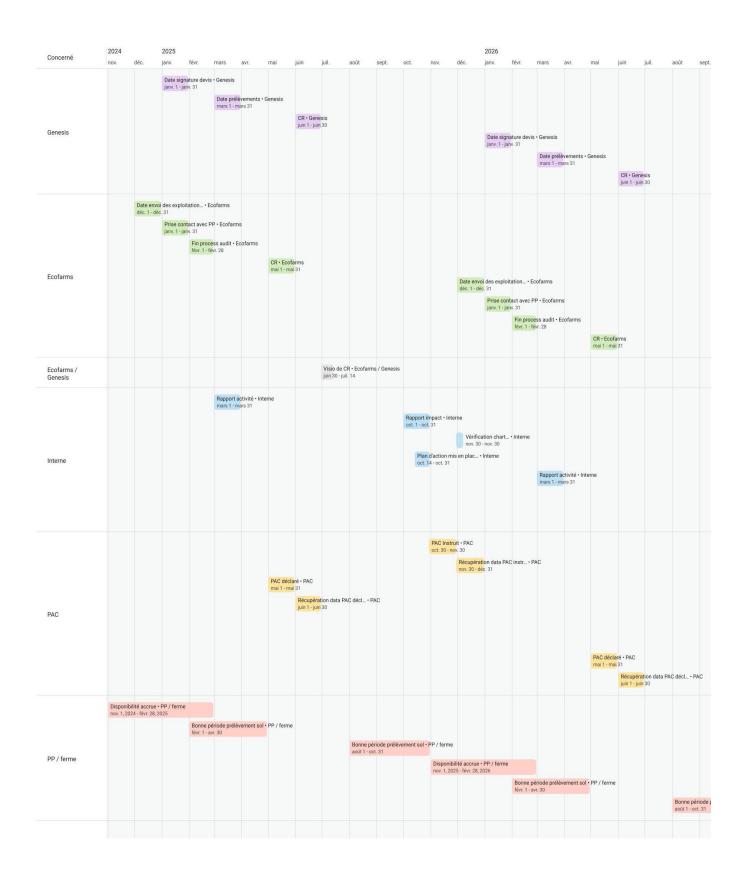
| Amuel | | Annuel | Annuel | Annuel | Annuel | |
|--|---|--------------------------------------|---|--|--|--|
| EcoFarms | | TéléPAC | EcoFarms | EcoFarms | TéléPAC | |
| Présence et préservation de races locales | Espèces adaptées au terroir (territoire, climat, pédo etc) | Chargement (UGB / ha) TéléPAC | : Usage des traitements vétérinaires | Pourcentage du temps passé en prairies (moyenne sur la durée de vie totale) | Proportion de la surface en IAE (IAE = haies, arbres, fossé non maconnée, mare, jachères, bordures non productives) | Surface Natura 2000 Surface ZIEE Surface ZNIEFF Surface ZNIEFF Surface zone humide |
| Cultiver - élever des espèces rustiques et - ou patrimoniales de races locales | Espèces adaptées au terroir Espèces adaptées au terroir terroir (territoire, climat, pédo etc) | Besoins physio et comportementaux | Approche préventive / pas de Usage des traitements traitements systématiques vétérinaires | Privilégie le plen-air | Minimum 10% surface IAE | Présence de zone à enjeu protégée |
| | Adaptation au terroir | | Bien-être animal | | Gestion de la biodiversité | Présence de zones à enjeux écologiques |
| | | | Agronomie | | | |

| | Maximiser captation (haies, couverts, travail des sols,) | Présence d'aménagements et pratiques pour maximiser la captation d'eau | TéléPAC | Annuel |
|--------------------------------|--|---|----------|--------|
| Gastion do lloun | Maximiser stockage (MO sol) | Taux de Matière organique du sol | Génésis | 5 ans |
| Cestion de Lead | Limiter la consommation (espèces adaptées etc) | Type de production adaptée à la disponibilité en eau | | |
| | Préserver la qualité (épuration écologique, respect des chargements, maîtrise épandages,) | Qualité de l'eau | Génésis | 5 ans |
| Approche circulaire | Utiliser au max les coproduits et limiter les déchêts | Gestion des déchêts et co-produits | EcoFarms | Annuel |
| | Autonomie gestion et décision | Capacité de prise de décision et de gestion | EcoFarms | Annuel |
| Indépendance | Limiter dépendance appro et Autonomie exploitation services extérieurs services) | Autonomie exploitation (approvisoonnement et services) | EcoFarms | Annuel |
| Gouvernance | Mode de gouvernance définit de manière co | Modes de gouvernance et de prise de décision définit de manière collective | EcoFarms | Annuel |
| Travail, capital et revenus | Revenu décent et équitable pour tous les travailleurs | Revenu décent (supérieur ou égal au SMIC) | EcoFarms | Annuel |

| | - | Partage au delà du périmètre de la ferme | Partage de connaissances hors de l'exploitaiton | EcoFarms | Annuel |
|-----------|------------------------------|---|---|----------|--------|
| | Partage des connaissances | Enregistrer et diffuser informations de mesure impacts agroécologiques, sociaux et éco | Mesures d'impact et communication | EcoFarms | Annuel |
| | Transmission facilitée | Orga et structure permettant l'arrivée de nouveaux PP | Potentiel de transmission de l'exploitation | | |
| | | Limiter énergies fossiles | Production énergie renouvelable à la ferme | EcoFarms | Annuel |
| | Impact env fort | Limiter matériaux non recylcables - non renouvelables | Mise en place de mesures pour limiter l'usage de matériaux non renouvelables | EcoFarms | Annuel |
| | | Maximiser investissements responsables (bâtiments, machines) | Investissements responsables | EcoFarms | Annuel |
| | | Partage de la connaissance au sein du territoire | Activité d'agrotourisme | EcoFarms | Annuel |
| Societale | Intégration au touritoine | Vente en circuits courts | Ventes en circuits courts (<80 km + direct conso) | EcoFarms | Annuel |
| | ier nore | Diversification des modes d'approvisionnement et de vente | Diversité des approvisionnements Diversité des débouchés de vente | | |

| Annuel | | Annuel | | Annuel |
|----------------------|-----------------------------------|---------------|------------------------------|------------------|
| EcoFarms | | EcoFarms | | EcoFarms |
| Produits de qualité | Atelier de transformation à la | ferme | Intégration du bati dans | le territoire |
| Qualité des produits | Produit fini distribué en | circuit court | Turnoot microid do Nootimitó | |
| | Alimentation de qualité | | Dôlo natimenta | vole patrimoniai |
| | | | | |

Appendix 6 : Global course of established farms' monitoring



Appendix 7 :FEVE's accompany to the project promoters after their establishment (slides extract from the Presentation to partners)



Après l'installation - La communauté FEVE

• Chaque porteur de projet installé a une page dédiée à sa ferme sur le site a accès aux photos et vidéos prises par l'équipe lorsqu'il le souhaite (publicité pour des débouchés en circuits courts, campagnes d'appel aux dons...)



Partage de campagne de financements participatifs

• Le porteur de projet est mis en relation avec des partenaires de FEVE en fonction de ses besoins (financement, etc.)



Page des fèves installées sur le site feve.co

- Le porteur de projet est intégré à la communauté FEVE :
 - Il est mis en relation avec les autres porteurs de projet installés via un groupe Whatsapp
 - Il peut solliciter la communauté pour divers besoins (recherche d'associés, de salariés, de formations, de fonds ...)







Photo au drone du Manoir d'Anctoville - Maxime. Utilisée pour un appel à financement participatif avec Miimosa par Emilie et Pascal



Carine Galante Cheffe de projet d'installation

• Suivi de la feuille de route et des évolutions de l'exploitation au regard de la

· Analyse RSE agricole : suivi des pratiques agronomiques, sociales,

Louise Boss Cheffe de pro

to The



Après l'installation - Le suivi FEVE







FEVE suit les exploitations après leur installation.

• Suivi mis en place avec des partenaires

économiques et de gestion - Ecofarms

charte agroécologique





Après l'installation - Le suivi FEVE • FEVE peut intervenir à la demandes des porteurs de projets pour les Appui au appuyer dans le développement Sur la ferme du Trey, FEVE accompagne Vivian et Julie dans l'installation de panneaux solaires sur la développement d'ateliers agricoles ou annexes à la toiture des bâtiments agricoles. de projets production • nouveaux ou en consolidation Exemples : Mise en place de panneaux En avril 2024, un partenariat entre FEVE et photovoltaïques sur les bâtiments d'exploitation / le fond de dotation Restore a permis de financer un diagnostic agro-pédologique Valorisation de crédits carbones / Plantations de haies sur la ferme de la Coutemillière. En juin 2023, FEVE a organisé un festival de l'agroécologie sur la ferme de Cussac, permettant de donner de la visibilité à • Le porteur de projet peut aussi demander à mobiliser le for de dotation de FEVE pour mettre en place des projets agroécologiques Gabriel au niveau local et national.

Appendix 8 : Extracts from EcoFarms' report on an established farm

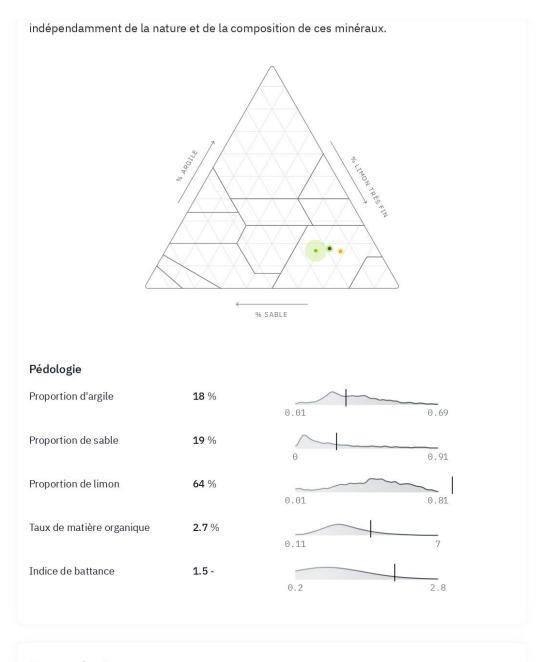
| Thématique | Score | | Score moyen des EA comparables | Score moyen du réseau | Meilleur score du réseau |
|---|---------------------------|---|--|---|--|
| Climat | 65/100 | | 60/100 | NA | NA |
| Air | 61/100 | ٠ | 63/100 | NA | NA |
| Biodiversité | 77/100 | • | 74/100 | NA | NA |
| Eau | 78/100 | | 67/100 | NA | NA |
| Sol | 46/100 | | 62/100 | NA | NA |
| Ressources minérales et fossiles | 63/100 | | 86/100 | NA | NA |
| Déchets | 53/100 | | 56/100 | NA | NA |
| | | | | | |
| DIMENSION ENVIRONNEMENTALE | 63/100 | ٠ | 67/100 | NA | NA |
| | 63/100 Score | • | 67/100 Score moyen des EA comparables | NA Score moyen du réseau | NA Meilleur score du réseau |
| ENVIRONNEMENTALE | | • | Score moyen des EA | Score moyen du | Meilleur score du |
| ENVIRONNEMENTALE Thématique | Score | • | Score moyen des EA comparables | Score moyen du réseau | Meilleur score du réseau |
| ENVIRONNEMENTALE Thématique Diversité et Inclusion Achats et Partenariats | Score 58/100 | • | Score moyen des EA comparables 46/100 | Score moyen du réseau NA | Meilleur score du réseau NA |
| ENVIRONNEMENTALE Thématique Diversité et Inclusion Achats et Partenariats responsables Formations, Engagement et | Score 58/100 67/100 | • | Score moyen des EA comparables 46/100 37/100 | Score moyen du réseau NA NA | Meilleur score du réseau NA NA |

| Thématique | Score | | Score moyen des EA comparables | Score moyen du réseau | Meilleur score du réseau |
|--|--------|---|--------------------------------------|-----------------------------|--------------------------------|
| COLLABORATEUR·RICE·S | | | | | |
| Santé, Bien-être et Sécurité | 52/100 | ۲ | 58/100 | NC | NC |
| Niveau de vie et Sécurité financière | 12/100 | | 41/100 | NA | NA |
| CONSOMMATEUR·RICE·S | | | | | |
| Services produits | 74/100 | ٠ | 47/100 | NA | NA |
| Qualité et Sanité de la production | 75/100 | ٠ | 36/100 | NA | NA |
| COLLECTIVITÉ | | | | | |
| Démarche collective | 39/100 | ٠ | 76/100 | NA | NA |
| Impact économique local | 46/100 | ٠ | 55/100 | NA | NA |
| Patrimoine local | 67/100 | ٠ | 46/100 | NA | NA |
| Engagement citoyen | 63/100 | ٠ | 75/100 | NA | NA |
| Transmissibilité de l'exploitation | 81/100 | ٠ | 76/100 | NA | NA |
| CHEPTEL | | | | | |
| Santé collective et Antibiorésistance | 77/100 | • | 83/100 | NA | NA |
| Santé et Bien-être animal | 55/100 | | 73/100 | NA | NA |
| DIMENSION SOCIO-ÉCONOMIQUE | 58/100 | | 59/100 | NA | NA |

Appendix 9: Aggregation of the indicators to constitute Biodiversity index score, from Genesis

| Biologie coef. 45 | | |
|--------------------------|---------|---|
| Disponibilité en oxygène | DÉGRADÉ | • 35 |
| Diversité bactérienne | MOYEN | • |
| Équilibre des formes d'a | MOYEN | • • 55 |
| Carbone coef. 30 | | |
| Équilibre des formes de | BON | • |
| Carbone biodisponible | BON | • • 76 |
| Pollution coef. 25 | | |
| Salinisation | BON | • • 100 |
| Nitrates | BON | • • 100 |
| Éléments trace métalliq | BON | • • 75 |

Appendix 10: Raw data – soil diagnosis farm an Hazelnut orchard





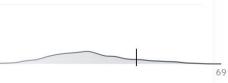
Issu des analyses fournies par nos laboratoires certifiés

Eau

Réserve maximale en eau

25

59 mm/cm



Physico-chimie

| Physico-chimie | | | |
|--|---------------------|------|-------|
| pH eau | 5.3 pH | 3.6 | 8.4 |
| Phosphore assimilable | 0 mg/kg DM | Θ | 63 |
| Teneur totale en carbonates | 0 g/kg DM | Θ | 177 |
| Azote total | 1.9 g/kg DM | 0.13 | 4.1 |
| Teneur totale en carbone organique corrigée | 16 g/kg DM | 3.3 | 43 |
| C/N | 8.2 - | 6.1 | 19 |
| Ions échangeables | | | |
| Calcium échangeable | 950 mg/kg DM | 0.65 | 9,75! |
| Magnésium échangeable | 88 mg/kg DM | 0 | 502 |
| Potassium échangeable | 174 mg/kg DM | θ | 801 |
| Sodium échangeable | 58 mg/kg DM | Θ | 114 |
| Capacité d'échange cationique | 6.6 meq/100g | 0.4 | 159 |
| Conductivité | 4.2 mS/m | Θ | 24 |
| Taux de saturation cationique | 93 % | 0.09 | 100 |
| Ratio Ca échangeable / CEC | 72 % | 0.04 | 100 |
| Ratio Mg échangeable / CEC | 11 % | 0 | 29 |
| Ratio K échangeable / CEC | 6.7 % | 0 | 8.7 |
| | | | |

| | Diplôme : Ingénieur en agronomie Spécialité : Agroecology Enseignant référent : Catherine DARROT | |
|---------------------------------|--|--|
| Auteur(s) : Elise DUPOUY | | Organisme d'accueil : Fermes En ViE (FEVE) |
| Date de naissance* : 14/10/2001 | | Adresse : 13 rue des Cordeliers |
| Nb pages : Annexe(s) : | | 33000 Bordeaux |
| Année de soutenance · 2024 | | Maître de stage : Simon BESTEL |

Année de soutenance : 2024

Titre français : Accompagnement de ferme engagées dans une charte agroécologique : contrôle, suivi des activités, mesures de durabilité et d'impact.

Titre anglais : Monitoring farms committed to an agroecological charter : control, activities' reporting and assessments of impact and sustainability.

Résumé (1600 caractères maximum) :

FEVE finance l'acquisition de foncier pour installer des fermes à pratiques agroécologiques avec de l'épargne citoyenne et institutionnelle. Ce fonctionnement s'articule autour d'une charte agroécologique que les agriculteurs s'engagent à respecter. Ainsi, il est important de contrôler le respect de la charte et l'impact de FEVE en suivant les activités et les direction prises par les exploitations installées via FEVE. Cependant, en 2024, la conjoncture agricole et les différentes crises qui en ont découlé témoignent d'une surcharge administrative vécue par les agriculteurs. L'enjeu est donc de mettre en place des démarches peu contraignantes et utiles aux agriculteurs.

Trois questions principales sont identifiées : Comment mesurer l'impact d'une exploitation agricole sur son environnement et sa durabilité? Comment mettre en place des audits et contrôles privés qui soient acceptés et acceptables par les agriculteurs? Comment valoriser les données mesurées via une mesure d'impact ?

La démarche mise en place pour répondre aux besoins de FEVE et aux différentes problématiques des agriculteurs permet de faire un tour d'horizon complet de l'exploitation. Elle se compose d'un audit RSE complet issu de la méthode IDEA4, d'analyses de sol et de l'acquisition de données complémentaires via des déclarations déjà existantes. La mise en place de ce suivi post-installation comprend l'organisation, la coordination, l'imbrication des différents contrôles ainsi que la valorisation des résultats obtenus, par les agriculteurs et par FEVE.

Abstract (1600 caractères maximum):

FEVE finances the acquisition of land to establish agro-ecological farms, using public and institutional savings. Its functioning is based on an agroecological charter that farmers commit to. So, it is important to monitor their accordance to the charter and the impact of FEVE by following the activities and direction taken by those farms. However, in 2024, the agricultural situation and the various crisis associated demonstrated the evidence of farmers' administrative overload. Therefore, the challenge is to implement procedures that are not too burdensome while being useful to farmers.

Three main questions have been identified: How to measure the impact of a farm on its environment and its sustainability? How to set up audits and controls that are accepted and acceptable to farmers? How can the impact be measured through the acquired data?

The implemented approach to meet FEVE's needs, and the farmers' problematics allows us to get a complete overview of the farm. The methodology consists of a full CSR audit based on the IDEA4 method, soil diagnosis and the acquisition of additional data from existing declarations (CAP). Setting up of this post-establishment monitoring includes the organisation, coordination and interconnections of the various processes, as well as the use of the results obtained, by both farmers and by FEVE.

Mots-clés : Agroécologie, contrôle, évaluation, FEVE, mesure d'impact, audit RSE

Key Words: Agroecology, control, assessment, FEVE, impact assessment, CSR diagnosis