

# **PerfEA: A methodological framework to help farm managers to build and manage a sustainable strategy in a participative way**

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## **Abstract:**

Farms evolve in a context characterized by uncertainties, changes of their legal, social and business environment. Thus it becomes difficult for farmers to set a course of their farm. We think that strategic management could be a relevant approach to help farmers to manage their farm and an important way to improve the global performance of the farms. To help farmers to formalize and to manage their strategy, we built a methodological framework.

The framework is organized in three steps: i) an in-depth analysis of the farm situation and the organization aims ii) formalization of the strategy and drawing up a balance scorecard; iii) elaboration of an action plan to monitor the implementation of the strategy. The link between the different steps is assured by the causal mapping.

A first test has been done within seven educational farms located in diversified geographical context and with different production systems. Thanks to these diversified contexts the methodological framework is suitable for any kind of farm. Furthermore, it is adapting to be relevant also for agricultural holdings.

## **1. Introduction**

French context of agricultural production is becoming increasingly complex. Firstly, due to the downward trend of Global Agricultural Income. Farm sizes are increasing and this phenomenon is accompanied by a saturation of working capacity (Mignolet et al., 1998; Dedieu et al., 1999). Moreover, capital intensity and the number of farms run as companies are increasing (Rattin, 2007). In addition, farms are developing new activities in order to differentiate themselves from their competitors (agrotourism, environmental services, etc.) (Agreste, 2011). Agricultural holdings are therefore moving away from the model of the family farm (Laurent & Remy, 1998).

Meanwhile, at the mercy of environmental, health and economic crises, the supervision of agricultural production by public authorities has intensified. Farms are facing rapid changes in the common agricultural policy with the reorientation of first pillar grants to the second pillar and the gradual disappearance of support mechanisms and market regulation. The supervision of farms

has also increased by downstream actors, especially with the strengthening of specifications and requirements in relation to production and the consolidation of contractual relationships between producers and collectors/processors. Farmers are operating in an increasingly competitive environment, one from which they had previously been relatively protected. Just like what happened in the industrial sector (e.g. the automotive industry), farms may be forced to progressively improve their technical, economic, environmental and social responsibility performance in order to maintain their activity.

This complex competitive environment poses a number of issues for both farmers and advisors supporting them: how to stay in the market and become indispensable to it; how to obtain and maintain competitive advantage; how to integrate new developments into everyday business activities; and how to develop the capacity to guarantee a response to downstream demand while maintaining or improving the performance level of the structure.

These issues are typically addressed by business management specialists in terms of strategic management (in the sense of leadership) and strategy of the firm. The strategic management approach remains marginal and is poorly developed in farms. Often if it exists, it is not organized and much less formalized. We make the assumption that strategic management could be a relevant approach to help farmers to manage their farm and an important way to improve the global performance of the farms.

In France, few original studies on farm management are carried out in the area of management science (Jeanneaux & Blasquet-Revol, 2012) while a large body of literature exists in English on strategic management as it applies to farming: fifteen works dealing with farm management have been published since the early 1980s (Barnard & Nix, 1979; Kay, 1986; Turner & Taylor, 1998; Casavant & Infanger, 1999; Olson, 2004 for example). Notable exceptions for France are Guichard & Michaud (1994); Hémidy & Soler (1994); Hémidy et al. (1996) who, in the mid-1990s, proposed the implementation of the strategic management approach in farming.

To develop strategic management in farming, the challenge is therefore to be able to give advisors the ability to initiate and support farmers in this process. This paper presents the outline of a methodological framework to assist in the implementation of strategic management in farming, in other words, to help farmers to formalize and to manage their strategy. It has been developed as part of an action research project named PerfEA.

Before presenting this action research, we will review the conceptual framework that governs the project (2.). We will then present the research system (3.) and the methodological framework (4.). Finally, we will review the implications that such a study can have for farming advisory services (5.).

## **2. Analytical framework of the strategic management approach**

### **2.1. The conceptual framework underlying the project**

We chose to build on a framework that is well known in management science: a continuous improvement cycle (Deming or Shewhart cycle). We implemented it to organize thinking around the building of our methodological framework to support strategic management. The concept of continuous improvement involves a number of sequential steps. (i) Planning the strategy requires the definition and formalization of a general policy broken down into strategic objectives and action areas, and then by the construction of an action plan. (ii) Implementing the action plan to bring the "as is" or current situation to the "to be" or future situation. (iii) Monitoring the results allows the assessment of the desired performance and the action plan. (iv) The re-examination of the strategy as part of this assessment should include the adjustment of strategic objectives as

necessary and the modification of the action plan. Based on the analysis that the farmer performs of his specific situation and the changes in his environment, the strategic management approach allows him to establish and implement a farm management project. It is about being able to build a strategy and obtain the necessary elements to make choices and adjust the priorities of the different objectives. The approach must be able to give him the means to manage his activity and to engage in a process of continuous improvement (Figure 1).

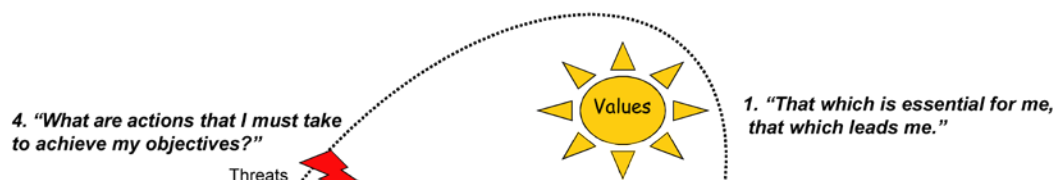


Figure 1: The strategy is the overall approach which allows the achievement of farmer's objectives.

## 2.2. Two conditions for acceptance by the decision makers on farms

We chose to use the strategic management approach by associating it with two conditions. The first is the desire not to produce normative recommendations but to work on a methodological framework that will produce an appropriate and relevant strategy taking into account the specific situation of each farm and its specific environment. The second is to go beyond the definition of strategic objectives and to give farmers the opportunity to develop management tools and performance indicators that are relevant to a continuous assessment approach. This approach will allow the farmer to build tools that, on an everyday basis, can help him to take stock of his strategy and his ability to achieve the defined objectives.

## 3. Action research with public agricultural education establishments

We chose to work with seven farms owned by public agricultural education institutions based in the Massif Central region (Middle of France). These farms build a farm management project and they play an experimental and developmental role which is an appropriate framework for our research. They also facilitate an initial design activity that would not be supported by private farms (risk-taking and freeing up time for design activities).

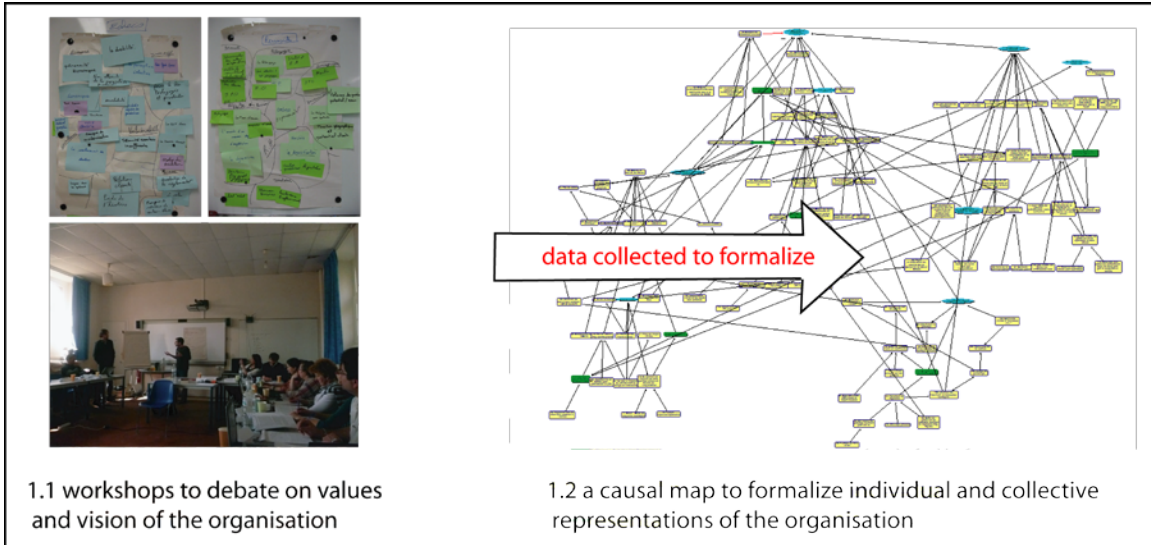
Farms owned by agricultural education institutions are complex structures. In addition to the need to ensure economic balance, they must be a powerful teaching aid. These farms are dependent on the institutional environment and local agricultural policy and may at times be caught in the

middle of power games. The creation of a farm management project is based on the development of various different projects (technical, economic, educational) and an experimental and developmental program. There are often many actors associated. They have many different functions and are often involved in very different ways in the farm operations (farm manager, employees, teachers, students, members of administrative boards). Moreover, project governance is complicated by frequent changes in the actors involved. To build a farm management project therefore requires real strategic thinking. Indeed, farm managers are faced with real methodological difficulties in relation to the successful management and control of the farm: how to mobilize employees, manage the processes, facilitate discussion, prioritize objectives and actions and define the result evaluation process?

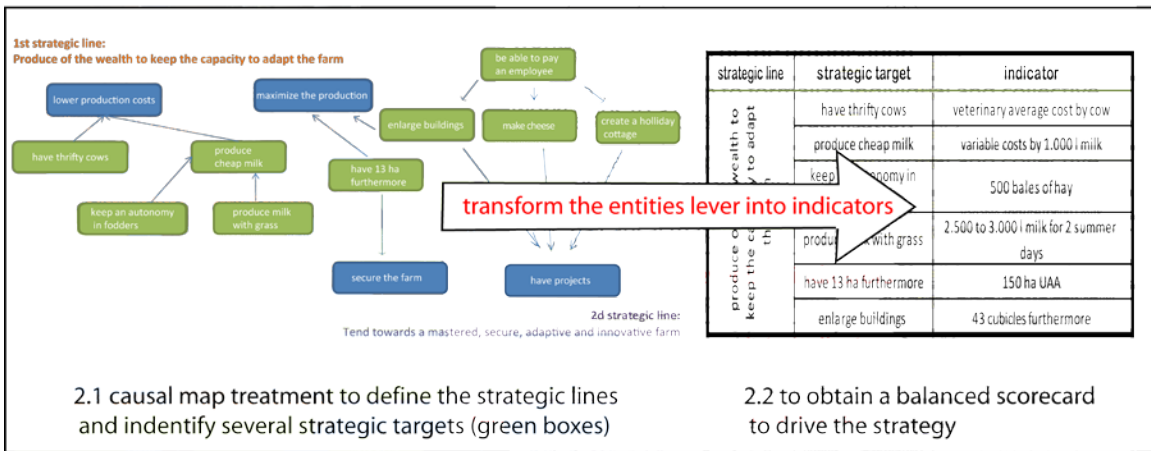
#### **4. A methodology for the implementation of the strategic management in farming**

##### **4.1. Three successive steps**

The methodology should support farmers in a process that is broken down into three successive steps (figure 2).



Step 1: from the workshops to a causal map



Step 2: from the causal map to a balanced scorecard

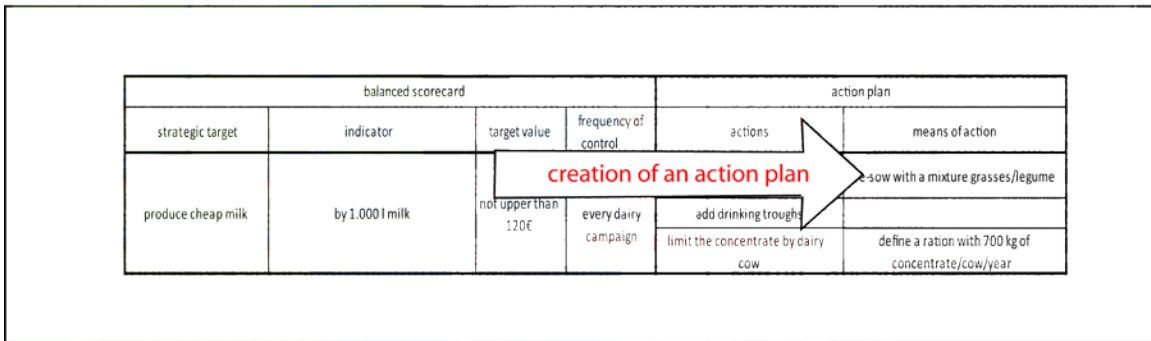


Figure 2: The methodology is in three successive steps.

The first step is based on an analysis of the future of agriculture, the environment and the motivation of farmers. This strategic thinking approach typically involves several areas for consideration, each representing different goals. A review of past successes and failures, the expression of a vision by projection into the future (3-4 years' time), the expression of values that drive the organization, consideration of the enterprise's missions and internal and external analysis are the many necessary elements of the strategic approach that allow the organization to agree on goals to be achieved and actions to be implemented.

The second step is to formalize the strategy and to support strategic management and the evaluation of the performance obtained. This step involves supporting farmers in the definition of strategic areas, the selection and prioritization of business objectives. It is based on the creation of a balanced scorecard as a primary tool (Chabin, 2008). This scorecard can be multi-dimensional, integrating criteria that are financial and non financial, short and long term, qualitative and quantitative, retrospective and prospective. Using the measurements produced, the scorecard reflects the degree of success of the strategy. It also aims to integrate non-financial indicators that are expected to provide a prospective overview of the company and its environment, which explains why we talk about a balanced scorecard (Kaplan and Norton, 2004).

The third step is to define an action plan which presents the means (financial, technical, human...) necessary to implement the strategy. Then it is to support monitoring the implementation of the strategy.

#### **4.2. A causal map ensures the link between steps**

The link between the two first steps is ensured by a tool to build, represent and negotiate the strategy: the causal map. This is a tool which has not been used in France to define strategic choices in relation to farming. The use of causal map to explore the cognitive structures of an organization is now widespread in management research (Huff, 1990; Laukkanen M., 1998). Particularly suitable for strategic approaches (Eden, 1988; Cossette, 2003), the causal map helps to formalize individual and collective representations. The cognitive approach allows company management to gain a greater understanding of their strategic situation and facilitates the identification of problems and their interrelationships. It also helps to develop new ideas with regard to possible directions for the company in order to facilitate decision-making in relation to strategic choice. The causal map was used to study the cognitive representations of different actors in various different contexts, some similar to those studied here, such as the performance of cooperative wine cellars (Chabin, 2008), or the modeling of perception with regard to the socio-ecosystem of farming among farmers (Fairweather, 2010). In practical terms, it is a graphical representation of defined entities (concepts) based on causality links which are identifiable by the discourse that unites them.

The representation of elements in a map can help to clarify our meaning. It shows the causal relationships and the reasoning behind decisions taken. Causal map is both a tool for communication with others and an analysis tool (Cossette, 2003). Therefore, the causal map is a mediation support tool that clarifies thinking and decision making and facilitates agreement on a strategy and the creation of a vision.

The structure of the map is an analytical support. It identifies causal links between different entities and thus facilitates the identification of the processes involved in the structure. It is possible to identify multiple links (more or less interdependent, more or less competitive, more or less contradictory, more or less important) that lead to the achievement of the same objective. These links are part of different coherent sets on the basis of which the strategy will be developed. On farms owned by agricultural education institutions, coherent sets of goals emerge

that are focused around economic, educational and local commitment themes. These links can also identify the strategic areas that form the basis for the implementation of the farm management project.

In addition, the causal map provides multiple analyses that can be used as part of a strategic approach. It therefore is possible to perform statistical analysis based on the map. One possible analysis highlights the entities that are essential to the strategy. This analysis provides indicators that will be used to build the balanced scorecard.

In practical terms, in our project, causal maps are iteratively and successively established with the assistance of an expert in the use of data processing software (Decision Explorer – Banxia Software), based on elements provided by each of the tools used in the first step. The different maps produced are presented for discussion, amended and validated by the stakeholders of the strategic approach. In the public agricultural education farms involved in the project, the stakeholders are for example farm manager, employees, teachers, students, members of administrative boards. The final map obtained is used to support the definition of the strategic objectives, actions and management and performance evaluation indicators.

Causal mapping takes a central place in the proposed methodological itinerary because it is:

- a support tool that acts as an intermediary, (Vinck, 2000) facilitating the cognitive process;
- an aid that provides a representation of the processes implemented in a structure and facilitates the identification of the core elements of the strategy;
- a tool that takes complexity into account without removing it (Axelrod, 1976);
- a mediation tool that helps to ensure that a group has a shared vision of a given strategy (Eden, 1988).

## **5. The place of advice and the conditions of transfer of the approach to Agricultural holdings**

The effectiveness of the strategic thinking is dependent on the relevance of the processes involved. Strategic thinking can not be satisfied with a single individual thought, it requires an external, distanced and independent perspective. This observation is not new (Hémidy *et al.*, 1996); it requires the involvement of a advisor. The advisor plays an important role in ensuring that all participants understand the thought processes involved and facilitates communication (Von Korff & Guetta, 2005).

The implementation of strategic management thus requires the support of an advisor and requires the consideration of the organizational arrangement of such advice. Starting with the idea that a successful strategy is not only defined by the degree of achievement of the objectives set but also by the result of a collective vision that has its foundations in individual representations which each person develops from his organization and strategy (Chabin, 2008), we suggest that structuring advice around groups of farmers and collective groupings will help to achieve the required results (Pervanchon *et al.*, 2007; Compagnone, 2009).

The function of the advisor is to ensure the smooth implementation and efficiency of strategic processes. The advisor relies on the methodological itinerary to identify the content and performs a synthesis and analysis function. His only intervention in relation to content is to reformulate or summarize it. The advisor should have a good knowledge of the tools used in the methodological itinerary in order to be able to adapt them at any time according to the group's production. Indeed, collective and individual expectations are not the same; some already have established strategic thinking abilities, others less so. This is where the advisor's role is essential: he must be able to immediately adapt the processes he wishes to implement with the group to support its

thought process, adapting them to the group's specific stage of advancement (Goulet et al., 2008; Pervanchon, 2008).

The public agricultural education institution farms are, in terms of their structure, similar to agricultural holdings. They differ, however, on two levels: they serve different functions (training, production, development, testing and international cooperation) and they operate under different governance structures (public institution under the responsibility of the Ministry of Agriculture, a head of establishment, teaching teams, administrative board). This unites collective structures such as Economic Interest Groups, small cooperatives (e.g. CUMA - cooperatives for the use of agricultural equipment), or large farms or collective farming groups (8 or 10 associates with employees).

Despite these differences, we hypothesize - and we will test the theory - that it is possible to develop support process for strategic thinking, planning and management that are comparable regardless of the type of agricultural structure. Despite the fact that strategic choices differ according to the specific nature of each farm, the need for a strategic approach still remains. Moreover, the difference is not as significant if we consider agricultural holdings, not as a whole, but as a variety of different systems serving different purposes (Laurent & Remy, 1998).

The relevance of the proposed methodological framework relies heavily on the capacity of the advisor to create satisfactory conditions for its use and to mobilize actors according to the nature and quality of the stakeholders involved in the operations of each farm.

## **6. Conclusion**

Based on the analysis that the farmer identifies his own situation with the help of a third party, the approach of strategic management that we propose would allow farmers to establish a farm management project and provide the continuous improvement elements of their projects. Our action research allows us to build a methodology by building on previous study in this area coupled with tools developed by management science for other sectors. The methodology is suitable for any kind of farm. Furthermore, it is adapting to be relevant also for agricultural firms. This last implementation has begun and seems successful. The framework is formalized as a guidebook. And we have developed a curriculum to train agriculture advisers, teachers or students to the farm management strategy.

This proposal is an initial contribution to a discussion regarding the support of the strategic management process in agriculture. This discussion may be extended in connection with the expected development of the environmental certification of farms or the increased focus on sustainable development and corporate social responsibility. The strategic management approach could emerge as a lever for action with regard to public agricultural and environmental policy, both in terms of the adaptation of farmers to changing public policies and in terms of the conditionality of public support.

The approach of providing advice to farmers in the area of strategic management should first be designed as a learning aid that will strengthen the capacity for strategic thinking of individuals and collective groupings as well as their ability to integrate sustainable development issues.

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