



SOLINSA
Support of Learning and Innovation
Networks for Sustainable Agriculture

Agricultural Knowledge Systems In Transition :
Towards a more effective and efficient support of Learning
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LINSA AND PESTICIDE REDUCTION IN THE FRENCH VINE PRODUCTION

SOLINSA SHOW CASE REPORT

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1. Summary

The study characterizes the LINSAs that have emerged in the French Vineyards in order to reduce the use of pesticide. Using the SOLINSA analytical framework we follow a two steps methodology: i) a national overview of the diversity of LINSAs, describing 72 LINSAs through expert interviews; ii) an in-depth analysis of one of this LINSAs – the Perrier Spring project- through interviews of 12 actors who participate to the successful development of organic viticulture around the spring.

Among the 72 LINSAs, we identify different levels of innovation referring to incremental innovations (evolving conventional, integrated viticulture) or to radical innovations (organic, biodynamic, new radical). The majority of LINSAs are specialized in one of these technical models, but 30% combine them. LINSAs promoting organic viticulture emerged as a radical bottom-up opposition to the conventional technical regime, and have been developed through a growing demand by consumers. LINSAs developing integrated viticulture emerged through top-down initiatives from the AKS, promoting incremental innovations, but also in order to combat the growing influence of organic vine growers. A recent policy initiative (Ecophyto) provides new incentive to LINSAs of integrated viticulture, to have more connection with organic growers.

The in-depth analysis of the “Perrier spring LINSA” reveals different steps: the LINSA emerged in 1993 through an alliance between Perrier Company (Nestlé) and the local wine cooperative, in order to preserve the spring from pollution. Between 1994 and 2000 the LINSA developed around a local clique in which experiences are shared, without any support of the AKS. The wine coop progressively built markets for organic wine, and the LINSA extend beyond the initial project of Perrier Spring. Since 2001, the LINSA progressively involved actors of the AKS and captured financial support, strengthening the network (400 hectares in organic viticulture). Since 2011, the cooperative faces difficulties to sell the whole production of organic wines, but a new local project emerges, involving a wider range of actors concerned with land management, support for young farmer setting-up and business diversification.

Our national survey and the analysis of the Perrier Spring LINSA show how market evolution and modifications of power relations have animated the conflictive co-existence of different types of LINSAs. This process has succeeded in reducing the number of treatments for herbicide, but not for insecticides and fungicides. We suggest that this co-existence of LINSAs is the key of the innovation process, each kind of LINSA playing a complementary role: LINSAs oriented to organic viticulture have introduced a radical perspective in the wine industry and have pushed the AKS to react, while LINSAs promoting integrated viticulture allowed the dissemination of advice and environmental concerns to a large number of organizations and farms. We thus suggest two interpretations of this process according to the MLP transition theory: i) LINSAs oriented to organic viticulture are building a new socio-technical regime with its own market and institutions; ii) Organic LINSAs are niches that will be absorbed by the main technical regime and the AKS.

Considering the current failure in radically reducing the use of fungicides and insecticides, we underline the necessity to go further with the Ecophyto farms network by using the EIP (CAP) and

GIEE (Ministry of Agriculture) initiatives in order to better connect top-down and bottom up innovations.

2. Introduction

In France, the wine industry is still using high amounts of pesticides that have negative impact on workers' health, ecosystems and potentially the reputation (and the prices) of wines. During the last 20 years, different kinds of LINSAs have emerged in order to reduce the use of pesticide in the vineyards. Some LINSAs emerged from top-down processes, driven by public agency and AKS (e.g. National Ecophyto program), others LINSAs resulted from bottom-up processes, pushed by networks of winegrowers, farmers associations, private retailers or wine cooperatives. Some LINSAs promote radical changes, such as organic or biodynamic vine management, when others aim only at modifying few practices such as herbicide use, without switching from the conventional way of production.

The overall purpose of this study is to characterize these LINSAs, to understand their impacts and to assess the conditions of their support by the AKS. According to the SOLINSA analytical framework, we emphasize two analytical dimensions of LINSAs: i) The "level of innovation", including radical vs incremental changes, or top-down vs bottom-up initiatives; ii) The "governance", taking into account power relations and the evolution, of links between LINSAs, Policy Makers, extension services and research.

Previous discussions within the SOLINSA project suggest the following specific research questions:

- How have different types of LINSAs emerged, evolved and co-existed in developing reductions in the use of pesticide in the French wine Industry?
- Which LINSAs have influenced the main technical regimes of the wine industry, i.e. have induced technical practice changes in order to cut pesticide use?
- Which opportunities, supports or obstacles have been provided by AKS to the different types of LINSAs in the wine industry?
- How can AKS promote a new governance of innovation in the wine industry in order to cut pesticide use?

These questions finally lead us to distinguish two complementary operational aims, corresponding to two steps in our work:

i) to give a **national overview of the diversity of LINSAs** that aim at reducing the use of pesticides in the French wine regions, and to understand the conditions of their co-evolution and their support by the AKS.

ii) to **analyse in depth one of these LINSAs**, taken as a specific case study for the SOLINSA project : we choose the network that emerged in 1993-94 between vine-growers of the Vergeze wine cooperative (Gard department, south of France) and the "Perrier Waters" company, who wanted to protect the Perrier Spring from nitrate and pesticide. We found that this LINSAs has had a long history, with different stages of networking, learning processes, and building relations with the AKS. By involving a wide diversity of actors (farmers, private firms, coops, AKS organizations, suppliers, merchants...), this case provides insights for the general overview of successful LINSAs in the French wine industry.

3. Methods

The study has been carrying out from May 2013 to August 2013, by Jean-Marc Touzard, Inra researcher (Economics of innovation), and Marie-Joseph Pull, Master Student in Viticulture/enology at Montpellier SupAgro.

We used a three steps analysis:

A) Overview on LINSAs in the French vineyards.

We first conducted a bibliography review on professional journals, websites, research reports and scientific articles, covering three main topics: debates on pesticide use in the French wine industry; evolution of the regulation framework on pesticide use; experiences from network analysis in the wine industry.

We thus interviewed 2 or 3 experts for each of the seven main French wine regions: Languedoc-Roussillon, Bordeaux, Bourgogne, Loire valley, Rhône Valley, Alsace, Champagne. These experts included at least one from a local research center (INRA or IFV), and the others from wine growers associations (agriculture chambers, wine union or organic farmers association). A semi-structured interview guide took into account the different dimensions of LINSAs. Information collected through the interviews was also completed by consultation of regional professional press or websites.

72 LINSAs have been identified and structurally described, according to the SOLINSA analytical framework (excel table), leading to propose a structural typology.

B) Focus on LINSAs in the Languedoc wine region

Referring to the structural typology, we chose four LINSAs in Languedoc, in order to carry out historical and network analysis:

- Ecophyto wine growers network of Narbonne (LINSA implemented by AKS, since 2010);
- Wine growers association of AOP Tavel (LINSA initiated by wine grower association, since 2009);
- Grappe 3 project in Alés-Anduze (project pushed by the community of municipalities, since 2009)
- “Wines from Perrier Spring” project (transition to organic viticulture promoted by private firm and wine coop, initiated in 1992).

For each case study we made interviews of key actors (between 8 and 12) in order to describe the evolution of the LINSA, according to the SOLINSA analytical framework: We used semi directive inquiry, focusing on the evolution of the interactions (structure, domain of action, relations to AKS).

In this report we present the case of “Perrier Spring”, which has a long and successful history of networking and learning about organic practices. It leads to organic production in the whole vineyard surrounding the spring, and has positive impact on other projects in Languedoc vineyards. For this case, 12 interviews have been conducted: Vergeze wine Coop CIO and chairman, former Perrier Cie

Local manager, pesticide local supplier, adviser of agricultural chambers, adviser of CIVAM BIO (association promoting organic agriculture), and 6 Vine growers involved in the project.

C) General analysis according to the specific research questions

Finally, results from the steps A and B have been used to address the specific research questions mentioned in the introduction. This synthesis refers to the SOLINSA analytical framework but also to the Multi Level Perspective approach on transition. This third step mobilizes comparative analysis and provides generic information. We also undertook supplementary short interviews in order to verify information and assess the limits of our analysis. This synthesis constitutes the conclusion of this report.

4. Results of the analysis

A. Main results from the national inventory of LINSAs

Among the 7 main French wine regions, 72 LINSAs have been identified and described. We recognize that these cases reflect the “most visible and institutionalized LINSAs” which have communicated on pesticide issue. We estimate that more than 500 LINSAs (aiming at reducing pesticide use) could be found in the French wine industry. Most of them are informal (e.g interactions between neighbouring farms) or belong to economic organization (e.g. working groups in wine cooperatives). We recognise that our study of the most formal and publicized LINSAs might well be a limitation to this analysis. The diversity of these LINAs is presented according to two analytical dimensions emphasized by SOLINSA : « level of innovation » and « governance ».

i) Level of innovation

Evidence of effective incremental innovation vs radical innovation/breaking the rules

We first identify five models of vine management, presented as ways for reducing pesticide use: The first two correspond to incremental innovations, the other three are radical innovations:

- a- **adapting conventional viticulture** to anticipate/follow the evolution of legal standards (Certiphyto). We finally exclude from our study the LINSAs which are referring to this model;
- b- **Integrated grape growing**: limitation of herbicides use, application of fungicide and insecticides according to observation and needs, adoption of (few) alternative practices (e.g. sexual confusion);
- c- **Organic viticulture**: radical systemic approach with dedicated regulation (certification), dealing with specific acknowledgment by consumers. Two options, more or less radical, are conflicting ;
- d- **Biodynamic viticulture**: more radical vision of wine production (component of natural cycles), using practices that try to reactivate life in soils and natural defence of vines. Private label;
- e- **New radical practices** with expected impact on the reduction of pesticide use : vine in agroforestry, new combinations between wine and livestock, natural wines...

We find that some LINSAs specialized on one of these models, but others (30-40%) combine different models in the same network. We finally suggest five types of LINSAs according to their level of expected innovation:

LINSAs specialized in integrated vine growing (incremental): 34 %

LINSAs specialized on organic viticulture (radical): 20%

LINSAs specialized in biodynamic viticulture (radical): 5%

LINSAs combining actors with different models (mainly organic and integrated management): 30%

LINSAs combining new radical practices with integrated or organic production: 11 %

In most cases (3/4), experts ensure that effective changes of practices are observed among members of the LINSAs, but little information exists about impact on external vine growers. National statistics (Ministry of Agriculture) and reports from INRA show that:

- Organic viticulture and biodynamic viticulture are extending, but they cover respectively only 6% and 2% of the French vineyard (2012);

- Volume and number of herbicide treatments decreased between 2000 and 2010 (between 20% and 50% according to the region). But this evolution has not succeeded the same way for insecticides and fungicides, which are covering more than 80% of treatments. Therefore the national average of Treatment Frequency Index (IFT) has decreased slightly, reflecting a high variability according to regions and vintages (f.i. facing highest rainfall, the fungicide IFT has been doubled in Burgundy between 2011 and 2012). Ecophyto target of “50% reduction of pesticide use for 2018” will not be reached.

- Experts and publications suggest many reasons for this small decrease of pesticide use: wine quality remains linked to “healthy grapes”, i.e. grapes without insect attack or fungus infection (the risk of lower “gustative quality” is often higher than the perceived risk of pesticide use); pesticide treatments remain the unique way to control main fungus infection (mildiou, oidium); organic viticulture excludes the use of herbicide but still uses mineral fungicide (copper, sulfur) which IFT is only 20% lower than the average, and could be higher than the IFT of integrated viticulture in case of wet years; IFT is a partial index and must be completed by the average dose per treatment, which is decreasing. Nevertheless impacts of the more concentrated active ingredient are not really known...

Evidence of small bottom up groups that (can) change the AKS vs top down initiatives from AKS

The AKS dedicated to the wine industry is based on two main subsystems:

i) The application of the **French “mainstream AKS”** on the wine industry, including INRA (Research), IFV (technical centre), wine specialized high school and engineer schools (teaching), agricultural chambers (extension). These organizations are already oriented by top-down (but open) vision of innovation, mainly promoting integrated viticulture (at least until 2010);

ii) Specific **organizations dedicated to quality wine promotion and regulation**: Inter professional Organizations (for each wine region), INAO, local AOP wine unions.... They are controlled by economic actors of the wine industry, promoting bottom-up or “regionally top-down” initiatives that enhance the quality of wine. They build codes of practices that influence pesticide use.

Knowledge and norms on practices are also produced in other groups of actors, generally considered at the frontier or outside the AKS:

iii) **Economic actors developing R&D** in their own organizations or through business associations: private estates, wine cooperatives, suppliers, wine merchants.

- iv) **Consultants or organizations** promoting new practices and alternative certification: ITAB (organic wine), Terra vitis (private certification of integrated vine), Demeter (biodynamic private label)... These initiatives are institutionalized and try to facilitate bottom-up processes;
- v) **Local associations, grassroots organizations or initiatives from local communities**: these bottom-up initiatives can be dedicated to organic or biodynamic wine (CIVAM), landscape management, specific environmental issues (e.g. acknowledgement of auxiliary fauna) or political claim.
- vi) **Ministry of environment, watershed agency, local water committee** (SAGE) which involves vine growers in several wine regions (for example through the protection of water quality).

We classified the 72 vine growers LINSAs according to their main connection to these groups of actors, considered as “driven actors”:

- 31 LINSAs (43% of our survey) are connected to AKS top-down initiatives. Among them 27 have been recently implemented under the “Dephy Farm networks” of Ecophyto program, driven by agricultural chambers and controlled by Ministry of Agriculture (8 in 2010, 15 in 2011);
- 14 LINSAs are promoted by AOP or IGP wine organizations, at regional or local level;
- 11 LINSAs refer to bottom-up “economic projects”, including wine cooperatives or business associations between private estates and wine merchants;
- 10 LINSAs are bottom-up initiatives driven by local associations, alternative networks or local government;
- 6 LINSAs are mainly pushed by private consultants or institutions such as Teravitis.

Comments should be made on this classification:

- LINSAs are mainly linked with different organizations, that makes sometimes difficult to identify the principal actors;
- Some LINSAs are clearly coming from AKS top-down initiatives, when others emerge as “pure” bottom-up projects oriented by economic or ethical goals. Between these two extremes, there is a wide range of cases combining top-down and bottom-up processes;
- Several actors (including vine growers) belong to different LINSAs. They are potentially playing the role of a bridge between LINSAs;
- Some LINSAs mentioned by experts may be just formal, without horizontal learning interactions.

ii) Governance

Power relations and construction of LINSAs

In France guidelines for agricultural policy are strongly influenced by a political compromise between the main farmers unions and the Ministry of Agriculture. In the wine industry this relation is further complicated by the power of organizations dedicated to wine promotion and regulation. Around this “triangle of power” (controlling the AKS), various organizations try to have influence on agricultural policy, or to promote alternative ways of development: ministry of environment, opposition farmers unions, grassroots associations, environmental NGOs...

At first, the “triangle of power” limited the development of organic production and promoted integrated viticulture, through the chambers of agriculture. Organic grape production was seen as carrying too radical a critique on the technical model supported by the AKS. Many LINSAs dedicated to integrated viticulture emerged in the 2000s, pushed by the AKS or by economic actors (coop,

providers, wine merchants), but most of these LINSAs disappeared. Organic viticulture developed outside the AKS, through individual strategies and through LINSAs supported by organizations often linked to NGOs. The bottom-up institutionalization of organic viticulture (creation of association, labelling, trade fairs and so on) helped the construction of LINSAs, but also strengthened the confrontation with the organizations of the AKS.

Several developments have changed the balance of power: Ministry of Environment drew attention to pollution problems; consumers have been recognizing the organic label, but not the labels of integrated viticulture; several AOP unions, cooperatives or prestigious wineries began producing wines from organic grapes; medias amplified these trends by promoting organic products; difficulties for selling wine between 2004 and 2009 led growers to seek new segments of market...

The major turning point came in 2007-2008 when the “Grenelle de l’environnement” (national platform on environmental issues) changed the balance of power in agriculture. By building a new political compromise over the institutional triangle (itself less convergent), including NGOs and the Ministry of Environment, the government succeeded in establishing new goals and a new policy. Ecophyto program was launched with the goal of 50% reduction of pesticide use in 2018. At the same time, organic vine growers and their organizations have gained legitimacy and additional support.

Nevertheless, the implementation of Ecophyto program shows that main organizations of the AKS regain control. Chambers of Agriculture establish themselves as leading actors in Ecophyto farms networks and have initiated advisory program on organic viticulture. Big wine estates adopt organic viticulture, developing an “industrial organic model” closer to the mainstream technical model....

Evolution of links between LINSAs, Policy Makers, extension services and Research

The AKS first made a selection of LINSAs, promoting those which were oriented toward integrated viticulture and opposing those which were cultivating organic grapes. However, policy makers tried to open opportunities to favour alternative LINSAs: Local contracts to farms (CTE) in 2000, application of the UE rural development policy (Leader, MAE), “combined technology networks” (RMT) in 2006, Grenelle and Ecophyto since 2007.... These opportunities have progressively connected actors from administration, research, extension services, organic organizations and LINSAs. Agricultural chambers and AOP unions have recently put organic viticulture on their agendas and many Ecophyto networks combine organic and integrated viticulture. Actors from organic viticulture establish new relations with actors from integrated viticulture, but these relations often remained weak or conflictive. In fact the involvement of organic farmers in Ecophyto networks is still limited, and many of them denounce a “green washing strategy” of AKS.

As far as Research is concerned (INRA), priority was also first given to integrated viticulture, or to specific solutions such as the creation of new varieties resistant to pest attacks. This option was consistent with a top-down vision of innovation. A new line of research emerged (since 2002), pulled by researchers personally convinced by the scientific and social contribution of organic production, and by systemic and participatory approaches. However the links between “organic LINSAs” and research remain often conflictive. The destruction of GMO vines (resistant to virus) in 2010 in Colmar INRA centre illustrates the intensity of the conflict. Growing demand of organic wine, environmental and health concerns, increase number of projects on organic production (f.i. UE-Orwine)... also

pushed INRA to develop partnerships with organic organizations (ITAB) and LINSAs. A new discourse promoting the « diversity of agri-food models », the “transition to agroecology” and the assessment of “innovative systems” becomes dominant in INRA and in the AKS.

B. Results from the show case “Wine from Perrier Spring”

The history of this LINSAs can be briefly presented according to 4 steps:

- 1990-1993: the LINSAs emerged from a global/local crisis

In 1990, benzene is discovered in Perrier bottles, revealing pollution at the bottling level, in Perrier spring, Vergèze (Gard dept, South of France). This crisis leads to the acquisition of Perrier brand by Nestlé group, and to a general review of measures protecting the Perrier spring.

Perrier “Estate manager” quickly initiates a project with the President of the wine cooperative of Vergèze: Perrier (Nestlé) proposes to buy the land around the spring (1000 hectares), keeping vine growers as tenants, if they switch to organic agriculture.

Four vine-growers (25 hectares) started organic conversion in 1993. 5 hectares were personally managed by the Perrier estate manager and 5 hectares by the President of the cooperative, in order to demonstrate their personal involvement in the project.

This LINSAs emerges as a response to a crisis, through an alliance between two charismatic men and between their companies (private and coop), with uncertain economic gains (security and new image for Perrier/Nestlé vs land access for members of the cooperative) in an unfavorable institutional and economic context (opposition or no support from AKS, uncertain market for “organic wine”).

- 1994-2001: development of the LINSAs outside the AKS

The number of growers involved in the LINSAs increases (15), covering 250 hectares of organic viticulture in 2000, i.e. the whole vineyard close to the source, and a third of that of the cooperative. Perrier invested in the project during first years: land acquisition, time of the estate manager, hiring a technician (one year), funding for training sessions, payment of crop loss (one year)...

The cooperative progressively finds markets for “organic wines”, whose prices just cover additional cost of producing organic grape (+ 30%).

First domains of learning were technical, focusing on fertilization (nitrates issue), then weeding (herbicide issue) and systemic vision of organic farming (first OA certification in 1997).

The LINSAs is built around a local grouping in which experiences are shared and members develop mutual help. The network progressively captures external (remunerated) actors according to concrete needs. Several external actors belong to AKS (INRA researchers have been developing a device for measuring nitrates, technicians participating in training session), but the project doesn't

receive any official support from AKS. Mainstream AKS organizations were against organic agriculture and organic social movement was unorganized.

- 2001-2011: extension of the LINSAs and involvement of the AKS

The production of organic wine and the LINSAs extend beyond the initial project of Perrier Spring. In 2011, 400 hectares are certified organic in the cooperative (including 250 around the Perrier Spring) and 200 hectares are managed through integrated viticulture. The cooperative (which has integrated growers from other villages) becomes "the first organic vineyard in France" (3 000 000 litres).

The demand for organic wine is growing and the cooperative has built a range of markets where the price is between 50% and 100% higher than the non-organic wine price (local, domestic and export). The domains of learning widened technically (f.i. sexual confusion) and integrate new issues on work organization, management and communication.

The LINSAs are organized around two groupings of coop members and involves a variety of new actors in the region and AKS: suppliers (partnership agreement with APL coop), wine traders (promotion of organic wines), organic association CIVAM (help for certification and administrative work), the Chamber of Agriculture (technician funded 50% by the Gard department)... The LINSAs progressively capture financial support from the French government and Europe (CTE, MAE, aids to organic conversion), but also from the regional council. The Mayor of Vergèze supports the LINSAs and develops a project "clean city without herbicide". The cooperative has become exemplary and receives many visits of growers wishing to convert to organic viticulture.

However, political conflict emerges between the company Perrier/Nestlé and local actors: Perrier and its new estate manager withdraw from the project, Nestlé threatens to close the plant and to relocate the Perrier Brand in another spring...

- 2011-2013: new crisis and new project?

Since 2011, the cooperative faces difficulties in selling the whole production of organic wines, whose prices decline slightly (lower demand growth, new competitors). Several vine-growers don't find successors, organic practices fail in giving solution to new vine diseases, subsidies are revised... The cooperative limits its production to 400 ha and 30 000 hl and seeks to build a new project.

The LINSAs are organized around local groups less dense, more differentiated (large vs. small producers, specialized vs non-specialized in organic wine). Many AKS organizations remain connected through new projects (CASDAR, network Ecophyto Gard...).

However Perrier/Nestlé reinvested in the plant and connects to the LINSAs. The firm is concerned by growing wasteland and the risk of fire in the spring surroundings. A new local project is emerging from the previous LINSAs, involving a wider range of actors concerned by land management, support for young farmer setting-up, business diversification, territorial communication...

“The company also owns 2,471 acres of farmland around its spring on which local farmers grow organic produce under the “Agriculture Biologique” eco-label, using no artificial fertilizers or pesticides. Protecting the territory and its ecosystem preserves the richness and purity of the water.”

Perrier company website

5. Conclusion

How have different types of LINSAs emerged, evolved and co-existed in developing reductions in the use of pesticide in the French wine Industry

Our study confirms the co-existence of different types of LINSAs aiming at reducing the use of pesticides. This diversity basically relies on different “models of wine production” in which the use of pesticides is considered in different ways. LINSAs referring to organic viticulture emerged as radical bottom-up oppositions to the main technical regime, and have been pulled by a growing demand by consumers. LINSAs developing integrated viticulture emerged through top-down initiatives from the AKS, promoting incremental innovation in order to reduce the number of treatments, but also in order to combat the growing influence of organic vine growers. Political or philosophical motivation combined with positive evolution of market driven organic LINSAs, while AKS support and seek for environmental legitimacy by conventional wine growers pulled the LINSAs of integrated viticulture, but failed in maintaining them over time. New policy (Ecophyto) gave new impulsion to LINSAs of integrated viticulture, with more connections with organic growers. New LINSAs emerged on more radical technical models, such as biodynamic, and the co-existence of different types of LINSAs remains conflictive. Evolution of market and modification of power relations in the wine industry have antagonistic influences, explaining the co-existence of different types of LINSAs.

Which LINSAs have influenced the main technical regimes of the wine industry, i.e. have induced technical practice changes in order to cut pesticide use?

LINSAs referring to organic viticulture and LINSAs oriented towards integrated viticulture have influenced the main technical regime, playing complementary roles: organic viticulture had the higher influence by introducing a radical perspective in the wine industry, generating protests, debates, rivalries and reaction of the AKS; integrated viticulture allowed the development of advice exchanges and environmental concerns in a large number of organizations and farms. This dual influence has succeeded at least in reducing herbicide use. The Perrier Spring case confirms that organic LINSAs played a leading role. Referring to MLP transition theory, two opposite interpretations are thus suggested:

- i) LINSAs oriented to organic viticulture are building a **new socio-technical regime** with its own market and institutions, acknowledged by consumers and policy makers, facing the emergence of new niches, such as biodynamic wine. In this case integrated viticulture could also be seen as a pathway to organic production;
- ii) Organic LINSAs are **niches that will be absorbed by the main technical regime**. LINSAs of integrated viticulture (involving organic farms) and the internal evolution of organic viticulture (industrial option, weakening of norms...) could favour this mechanism of absorption, which can change the regime as far as pesticide use is concerned.

Which opportunities, supports or obstacles have been provided by AKS to the different types of LINSAs in the wine industry?

Until 2005 the AKS was opposed to the development of organic viticulture and promoted LINSAs dedicated to integrated viticulture. The distribution of subsidies, courses contents in agricultural high schools, advice given by extension services, political legitimacy, judgment on the quality of wine (supposedly less tasty for organic wines), research agenda... constituted obstacles to LINSAs oriented towards organic viticulture, and has limited their dissemination. CAP, institutional innovations, and overall the “Grenelle platform” have opened more opportunities for alternative LINSAs. These institutional changes were pushed by the evolution of the market and by the influence of external actors, such as European projects, Ministry of environment, local government, water agencies, NGOs, actors of tourism, firms facing environmental issues (i.e. Perrier Spring). New supports (i.e. subsidies for organic conversion, evolution of research agenda, Ecophyto farms networks) have been provided by AKS benefiting to the different types of LINSAs.

How can AKS promote a new governance of innovation in the wine industry in order to cut pesticide use?

The Ecophyto program will be soon assessed. It will provide new information on the 27 related LINSAs. Institutional changes in the AKS will also give new opportunities for different types of LINSAs: EIP and the GIEE (Groupe d’Interet Economique et Environemental) promoted by the Ministry of Agriculture. These initiatives aim at better connecting top-down and bottom up innovations. Our study confirms the crucial need of these connections. We also suggest other recommendations to AKS:

- Many studies note the positive effect of collective action (i.e. LINSAs) on the reduction of pesticide use, at least among the members of these networks. It calls for specific help (bonus) to LINSAs;
- AKS must really recognize the diversity of technical models, including biodynamic and new forms of radical practices. It calls for even more attention to bottom-up innovations in research, extension services, project founding and education;
- In this sense, we suggest that each wine region could organize a regional platform on “sustainable viticulture”, involving AKS organizations (including wine unions and agricultural chambers) and external / alternative actors (including consumers and NGOs);
- It is obvious that viticulture is facing major technical obstacles that limit the possibility of reducing pesticide use. That calls for genetic selection on resistant varieties of vines, which can be managed by participatory research;
- We recognize that markets have been the driving force, which has pushed the development of wine coming from organic viticulture. Business projects and the promotion of these markets may be specifically encouraged, as well as the possibility of including environmental standards in AOP codes of practice.

APPENDIX I LIST of LINSAS ACCORDING TO THEIR PRINCIPAL ACTORS

DRIVEN ACTORS	REGION	NAME	PURPOSE AND TYPE OF ACTIONS
ORGANISME D'ACCOMPAGNEMENT	INITIATIVE NATIONALE EN EXPLOITATION (27)	RESEAU DEPHY ECOPHYTO Début en 2011-11	Optimisation des réductions de pesticides dans le cadre du plan Ecophyto, recherche d'alternatives et échanges entre exploitations
CONSULTANTS	BOURGOGNE	BB3-GROUPE FAUNE AUXILIAIRE IFV 2000 (fini)	Développement de la lutte biologique par faune auxiliaire par transfert de connaissances sur le terrain. « Compagnonnage » entre producteurs formé et les nouveaux arrivants. Par un gérant de château en cru classé à St Emilion
	AQUITAINE	AQ6-CONSEILS EN BIODYNAMIE 2009	Consultant en veille sanitaire, développement de la viticulture durable et raisonnée
	CHAMPAGNE	CH5-VEILLE SANITAIRE MAGISTER 1991	
ORGANISME D'ACCOMPAGNEMENT - PRODUCTEURS	INITIATIVE NATIONALE EN EXPLOITATION	CHARTRE TERRA VITIS 1993	Guide de bonnes pratiques et vue de la certification de l'exploitation, approche environnementale
9 COOPERATIVES	LANGUEDOC (4)	LR1-VERGEZE 1993 LR-7-MASSILLARGUES – TORNAC 2001 & 2009 LR5-CAMPLONG 2001 LR9-A. DES JOYEUSES 1994	Conversion massive en AB Passage en AB et projet socio économique 100% Terra Vitis Charte interne environnementale et paysagère
	AQUITAINE (2)	AQ4-TUTIAC RAUZAN 2008 AQ5-UNIVITIS	Cahier des charges AB et engagement charte de démarche de Développement Durable
	COTES DU RHONE (2)	CRDP2-CHUSCLAN-DOMAZAN : coop et caves particulières 2011 CRDP3-ESTEZARGUES 2010	Restriction des herbicides et respect du bassin versant, AB MAEt sur bassin versant
	CHAMPAGNE (1)	CH3-NICOLAS FEUILLATTE 2008	Engagement en viticulture durable et AB. communication
GROUPES DE PRODUCTEURS INFORMELS - CAVE PARTICULIERES	AQUITAINE	AQ2-Club des châteaux du Médoc 2009	Optimisation des pratiques, R&D
	ALSACE	AL1-OPABA 1980 AL2-Association TYPHLO (dissoute)	Développement de l'agriculture durable et AB dans le Rhin supérieur Instauration de la lutte biologique par reconnaissance au

		Fin années 90-début 2000 AL3-Nombreuses initiatives entre groupes de producteurs AL4-zone du Haut Rhin traitée par hélicoptère AL5-Préparations de semences pour enherbement 2010-13	champ de la faune auxiliaire (Typhlodromes) Optimisation des moyens et des pratiques Projet de traiter en AB à partir de 2014, en respect du voisinage déjà en AB Préparations spécifiques de semences pour enherbement
	BOURGOGNE BEAUJOLAIS	BB2-GEST 2001 BB5- Mobilisation des Artisans Vignerons de Bourgogne du Sud 2013	Fourniture et préconisations de composts des sols Demande de limitation des traitements contre la flavescence dorée
	COTES DU RHONE PROVENCE	CRDP4-Viticulteurs De Correns. 1997	Passage en AB des producteurs coopérateurs et particuliers
	LANGUEDOC ROUSSILLON	LR6-Collectif et agropastoralisme et traction animale en viticulture de montagne-Colliure 2010	Recherche d'alternatives agro écologiques, économie solidaire.
	VAL DE LOIRE	VL4-Accord pour la certification HVE niveau 3. Vignerons Indépendants 2013	Accompagnement des caves particulières et un accès simplifié aux démarches de certification environnementale des exploitations.
ORGANISMES PROFESSIONNELS	INTERPROFESSION	CH6-ACTIONS AU VIGNOBLE DU CIVC Depuis 2000	Contribution à l'intensification écologique au vignoble
	ODG AOP	BB1-FONTEVRAUD-BROUILLY ODG Brouilly Côtes de Brouilly 2011	Adhésion à la charte de Fontevraud
		CRDP1-Traitement AB aérien ODG Côte Rôtie 2011-12-13	Entente entre propriétaire et obtention d'autorisation
		LR4-ODG TAVEL 2009-2013	Ré écriture du cahier des charges Tavel avec limitation d'herbicides, travail du sol et autre mesure environnementale
		VL2-Haies Saumur Champigny ODG Saumur Champigny 2004	Développement de la biodiversité par plantation de haies et efforts paysagers, 20 km.
		VL3- Viticulture durable subventionnée par ODG Touraine Amboise 2001	Contrat sur 3 ans signé par ODG Touraine Amboise : équipements en matériel aratoire et traitements des effluents
		VL5-Réseau de piégeages pour l'appellation Saumur Champigny 2004	Piégeage pour ravageurs de la grappe : Cochyliis, Eudémis, Cicadelle Verte, Cicadelle de la Flavescence Dorée. Et parcelles de suivi avec station météo
		VL1 Adhésion charte de Fontevraud Pays de Loire avec Interloire et Maison du vin de Loire 2003-04	Engagement dans des démarches paysagères volontaires et concertées, développement durable, optimisation de la production culturelle et touristique, dans le cadre d'un réseau

TYPE DE PORTEURS	REGION	LIBELLE	OBJET	
ORGANISMES PROFESSIONNELS	SYNDICAT DE PRODUCTEUR	CH1-Expérimentations du Syndicat Général des Vignerons (SGV) 2010 CH2-Mise en place collective de la confusion sexuelle sur Mesnil/Oger dès 1990 CH4-Optimisation de l'application des traitements SGV Champagne dès 2010	international. Demande d'expérimentations R&D sur pulvérisations de produits phytosanitaires Lutte biologique collective contre les tordeuses de la grappe par confusion sexuelle Optimisation de l'application des traitements, pulvérisations	
		AQ3-Syndicat des producteurs en AB Montagne St Emilion 2012 BB4-Démarche contre les traitements aériens (CAVB = Confédération des appellations et des vignerons de Bourgogne) 2013	Expérimentation d'alternatives pour la protection de la vigne, projet CASDAR Contestation des autorisations des traitements aériens	
		GD1-Gedon de Pessac Léognan 2010 LR14-GDA de Latour de France (66) 2011	Veille sanitaire sur flavescence dorée, diminution des interventions ordonnées en Préfecture Pose collective de racks pour confusion sexuelle	
NEGOCE	GDA-GDON-FREDON	AL1-OPABA. 1980 AL2-Association TYPHLO (dissoute) 2000 CRDP5 ASSOCIATION AGRIBIO VAR 1997	Développement de l'agriculture durable et AB dans le Rhin supérieur Instauration de la lutte biologique par reconnaissance au champ de la faune auxiliaire (Typhlodromes) Aide au développement de l'agriculture Bio	
		Négociant vinificateur	LR8-Maison de blanquette Antech-Limoux et TerraVitis 2013	Mise sous charte Terra Vitis des 30 fournisseurs de raisins du négociant manipulateur
		Groupe de négociants propriétaires	LR2-HOLDING ADVINI 2011	Engagement de 100% AB pour les 6 propriétés du groupe Mise en place service R&D et viticulture durable
RECHERCHE	ALSACE	AL6-Plateforme d'Evaluation des Performances de Systèmes Viticoles Innovants. INRASAD	Expérimentations et conception de systèmes culturaux innovants pauvres en intrants	

APPENDIX II. FARM NETWORKS OF THE ECOPHYTO PROGRAM IN VITICULTURE

REGION	DRIVEN ACTORS	DESCRIPTION	ACTIONS
AQUITAINE 44 fermes et Ouest	Chambre agriculture 33	OUEST 10 EA dont 3 lycées, 3 EA en conversion AB, Gironde	Accent mis sur les modèles de prévision EPI avec IFV. Optidose + POD Mildium (IFV-Irstea) Prophylaxie Réunions et actions techniques sur le désherbage mécanique
		EST 12 EA , 8 en Gironde, 3 en Dordogne et 1 en Lot&Garonne dont 1 lycée , 2 EA en conversion AB	Accent mis sur les modèles de prévision EPI avec IFV. Optidose + POD Mildium (IFV-Irstea) Alternatives au désherbage chimique et épamprage Optimisation pulvérisation Conversion AB
	Association Agrobio Périgord	10 EA dont 1 lycée et des bio + en bio conversion (en Dordogne, AOP Bergerac)	Veille sanitaire, essais de produits alternatifs en fongicides et insecticides, diminution du cuivre et soufre, travail du sol Réunions en vigne, bulletin de santé, bilans de campagne
	Euralis agro fournisseur développeur et consultant	12 EA dont 1 lycée agricole, Gironde, Landes, Pyrénées Atlantiques	Accent mis sur herbicides, fongicides, épamprage, pulvérisation, limitations des interventions contre la Flavescence dorée et les tordeuses de la grappe
	Chambre agriculture 17	10 fermes	Accent sur la diminution d'intrants, recherche de procédés performants pour une production dédiée à la distillation, conversion AB
	Chambre agriculture 32	côtes de Gascogne, Côtes de st Mont, Madiran	Veille sanitaire, OAD, désherbage sur le rang, SDN, pulvérisation
	Chambre agriculture 81	11 EA, AOP Gaillac	Accent mis sur les réductions d'intrants, le respect des zones de captage. Taille, couverture du sol, SDN, machinisme sol et pulvérisation Objectif de valoriser AB Actions : visites, suivi individuel, bilan, démonstrations, formations
ALSACE LORRAINE	FREDON LORRAINE	9 EA, AOP côtes de Toul et de Moselle, IGP côtes de Meuse	Confusion sexuelle, prophylaxie, désherbage mécanique, PNPP et SDN Formations et animations
	Chambre agriculture 68-67	10 EA réseau avec Marne et Lorraine, Lycée de Rouffach	Diminution des intrants, optidose avec IFV Prophylaxie contre Botrytis, travail du sol alterné, Animations, échanges, colloque annuel
BOURGOGNE	Chambre agriculture 71	11 EA réparties sur la quasi totalité du	Comparaison des systèmes de culture (IPM, viticulture raisonnée, AB,

BEAUJOLAIS		département	diminution du soufre, comparaison AB/biodynamie
	Chambres de 21-89- société viticole du Jura		Démonstrations de pulvérisation, sol et entretien des sols, matinées techniques du BIVB, évolution d'Indigo
CHAMPAGNE	Chambre agriculture 51	13 EA dont 2 lycées	
	Chambre agriculture 10	11 Ea dont 6 membre du GDv, groupe de surveillance phyto, 5 adhérents de grand groupe coopératif (Union Auboise)	Accent sur la diminution des IFT (23.8), diminuer les herbicides Réunions et formations
COTES DU RHONE PROVENCE Et RHONE ALPES	Chambre agriculture 84	R de cuve = 8 fermes, 2 communes, tous systèmes de culture R de table = 8 fermes	Accent sur la réduction des pesticides
	CIRAME (centre d'animation agro météorologique en PACA)+ Chambre agriculture 13-83-84-26	4 zones : côtes du Rhône,, coteaux du Tricastin, Coteaux d'Aix, Provence. Observations de terrain par le GDON	Accent mis sur les alternatives de produits phyto, surveillance des résistances, lutte contre la cicadelle de la Flavescence Dorée. Expérimentations avec France Agrimer, BSV, animations, démonstrations
	Chambre agriculture 69	10 EA sur l'ensemble du Beaujolais	Comparaison entre les systèmes de culture Diminution des intrants
LANGUEDOC ROUSSILLON	Chambre agriculture 11	8 fermes	Diminution des intrants Accompagnement individuel, restitution annuelle
	Chambre agriculture 30	10 EA dont 1 lycée	Diminution des intrants
	Chambre agriculture 34	10 EA entre 16 & 80 ha, basse vallée de l'Hérault	Accent mis sur l'arrêt des herbicides, la diminution des intrants, agro écologie
	Chambre agriculture 66	11 coopérateurs de Terrats, anciens réseau Farre, viticulture raisonnée	Diminution des intrants
VAL DE LOIRE	Chambre agriculture 49	12 EA, Anjou, Saumur	Accent mis sur la veille sanitaire, réduction des doses, OAD. Travail sur la diversité
	Chambre agriculture 44	10 EA,	Accent mis sur la conversion, substitution, modélisation de précision
	Consultant	11 EA en Muscadet	Accent mis sur la prophylaxie, modélisation

APPENDIX III. SHORT ANALYSIS OF THE LINSA “PERRIER SPRING and VERGEZE COOP”

Contexte :

En [1990](#), la crise du [benzène](#) met un frein à l'expansion de Perrier (la marque vendait alors un milliard de bouteilles par an) qui décide le retrait global des bouteilles. Des traces de [benzène](#) sont découvertes par un laboratoire américain dans quelques bouteilles de Perrier (13 bouteilles). Gustave Leven décide alors de retirer les bouteilles de six pays : [États-Unis](#), [Canada](#), [Japon](#), [Allemagne](#), [Pays-Bas](#) et [Danemark](#). 280 millions de bouteilles seront détruites dans le monde dont 160 millions aux [États-Unis](#). Coût total du retrait : plus d'un milliard de francs, pour ce qui semble n'être qu'une simple erreur humaine. À l'entrée des chaînes d'embouteillages, le filtre chargé d'arrêter les impuretés contenues dans le dioxyde de carbone de la source, en principe remplacé tous les six à huit mois, ne l'a pas été à temps. D'où une présence intempestive de [benzène](#) d'origine fossile dans le produit fini.

[Nestlé](#) prend le contrôle de Perrier le [22 mars 1992](#) par une [OPA](#) d'un coût de huit milliards de francs. Le groupe Perrier est alors démantelé : Nestlé récupère la marque Perrier et revend les autres sociétés pour cinq milliards, [Roquefort](#) à [Besnier](#), [Volvic](#) à [BSN](#), [Saint-Yorre](#) et [Vichy](#) au groupe Castel. L'ambition est [Nestlé](#) : devenir le leader mondial des eaux minérales pour former le groupe *Nestlé Waters SA*, sa division Eaux

Genèse du passage en AB :

dès [1992](#), la nouvelle direction demande aux producteurs fermiers des terres Perrier (viticulteurs, céréaliers et maraîchers) de passer en AB ou bien de consentir à des échanges de terres. En effet, Perrier avait racheté entre 900 et 1000 ha de terres agricoles et non agricoles. Cela a impacté le niveau de reprise de l'activité agricole car nombre de vendeurs préféraient vendre au prix fort à Perrier. Le prix du foncier reste élevé à ce jour.

Accompagnement, animation :

- Suivi collectif : dès le début en [1992](#) **réunions informatives de mise en place**, [portées par Perrier](#) et son charismatique responsable de cultures. Sélection des viticulteurs leaders : président et viticulteurs expérimentés. Fin de ces réunions en 1993-94.
- **Aujourd'hui CA 30 et son technicien spécialisé** en AB **groupes de lutte raisonnée locaux**, ouverts aux viticulteurs qui veulent. Ceux de Vergèze sont les plus fidèles. (**Aucun accompagnement dans les années 90.**)
Formations à la carte selon les besoins diagnostiqués
- [Agro fournisseurs](#) présentent les nouvelles spécialités 3-4 fois /an ainsi que des **conférences à thème**, sur demande de la coopérative.
- A la marge : [Bassin Versant du Vistre](#) : quelques producteurs sont concernés car vignes à la lisière du zonage (MAEt et animation de bassin)
- **Sessions de formation** via [CA30 et civam bio](#) : **2005-10** : reconversion AB, après **2010** techniques de réparation, car le matériel est très sollicité en AB : soudure, hydraulique...

Echanges et recherche de connaissances :

- Le technicien AB de CA30, lors des groupe de lutte et lors des **suivis individuels, sur demande** : le coup par coup sur les décisions de traiter contre les pathogènes durant la saison, en hiver, les nouveautés à venir
- Agrofournisseurs (l'un d'eux est **prestataire contrôle de maturité et classement qualité parcelle de la coopérative**). En visite individuelle également (service au client et prestation payante). Ont leurs parcelles de référence pour les comptages, ils informent donc les exploitants de cette parcelle. **Même contenus d'informations que CA30**, plus orientés produits et négociation des prix.
- Formation initiale des coopérateurs : fac de sciences, BAT-BTSA pour certains
- Littérature : la Vigne, Viti, Réussir Vigne (carnets envoyés gratuitement), Le Paysan du Midi, internet
- INRA pressenti par Perrier en **1992**, pour **mesurer les pollutions agricoles**. Contre AB à cette époque
- Sudvinbio, surtout sur **l'œnologie** et les **marchés**, mais ressource **technique** quand même
- La participation des viticulteurs à d'autres structures et associations enrichit l'information : Ex : *BV Vestric et sauvegarde d'espèces protégées vs qualité de l'eau et des habitats sauvages, conseiller municipal dans un zone de captage prioritaire, association de chasseurs...*

Modifications de pratiques :

Pour tous : limitation des interventions contre le Mildiou, grâce au sous dosage en AB et au bon positionnement du traitement (IFT tombe de 1 à 2 unités)

- Lutte biologique :
 - **Pour ceux qui ne confusent pas encore** : observation des pontes de vers de la grappe, souvent 0 traitement en génération 1 (G1), intervention non systématique en G2, traitement en G3 uniquement si forte pression et soucis en G2. Un seul coopérateur recourt à l'insecticide (source : le principal agro fournisseur)
Pour les **nombreux adeptes** de la confusion sexuelle, projets **d'accroître les surfaces confusées**, **groupes actifs** intercommunaux pour motiver les autres producteurs et négocier les prix.
 - L'alternative de la lutte par phéromone est la lutte avec *Bacillus thuringiensis*, (toxine d'origine bactérienne) **n'est pas adoptée par tous**, car peu d'entre eux maîtrisent le bon positionnement du traitement
- Equipement progressif de pulvérisateurs de précision et de **matériel globalement performant**, nombreux échanges sur le matériel aratoire
- **Pas de prophylaxie spécifique** / maladies fongiques du type effeuillage, compte tenu du climat local
- impasses ou difficultés techniques récurrentes :
 - Oidium difficile à suivre, même si sous dosages maîtrisés
 - Maladies du bois : pas de produit remplaçant
 - FD : pas de pression majeure, diagnostic difficile vs le bois noir
 - (A la marge : arrivée d'une tordeuse de la grappe nouvelle à la vigne : Cryptobales)

Dossiers, certifications, subventions :

Démarches : pas de nouvelles conversions AB car l'ensemble des terres Perrier est 100%AB. Seules sont concernées les nouvelles plantations.

Fin des CTE subventionnant le passage en AB (1000 dégressif à 350 €/ha sur 5 ans)

Primes PAC pour le maintien de AB (150€/ha), et la conversion AB (300 €/ha, à vérifier), **Primes PAC pour les céréaliers**

La Région finance 50% des coûts de certification AB pour les nouvelles labellisations

CG 30 finance % salaire du technicien chambre AB

Le technico commercial parle de solliciter CG30 qui pourrait contribuer à financer la confusion sexuelle, comme le fait CG34.

DESCRIPTIF	COMMENTAIRES CRITIQUE	REMARQUES
Historique	Sur commande expresse de Perrier, propriétaire de 250 ha de vignes : conversion AB dès 1993	Alternative : l'échange de terres. Certains ont fait les 2 pour s'agrandir rapidement
Motivations premières	1992 <u>Perrier</u> : Zone de protection du captage des sources efficace <u>Producteurs</u> : pouvoir accéder au sol et au travail	Pas de motivation environnementale particulière.
Motivations actuelles	1999 Recherche de valorisation de la production avec meilleure marge 2000-2011 Besoin de finances fournies par les CTE de conversion en AB	Certains sont prêts à abandonner AB si le différentiel de rémunération coût de production est négatif.
Actions menées, accompagnement	2005 <u>CA30 Formations</u> à la conversion AB puis machinisme : plusieurs fois/an Groupes de lutte hebdomadaire en saison + conseils individuels par la <u>chambre, agro fournisseur</u> Aides aux dossiers subventions par <u>bio civam</u>	Pas d'initiatives ni services institutionnels avant 2000's Synergie entre CA30 et bio civam
Changements de pratiques concrets Impasses technico économiques actuelles	>400 ha vignes en AB en 2013 contre 25 ha en 1992 Confusion Sexuelle adoptée par la majorité, même les non AB Travail du sol en cours de perfectionnement Maladies du bois Surcoût de production	Les polycultures (céréales, fruitiers, oliviers) ne sont pas traitées en AB sans projet de passer AB. Enjeu : maîtriser AB sur vignes
Changement des mentalités	AB acceptée par tous depuis 2007/10 (fin de l'image soixante huitarde) Grande fierté de maîtriser globalement AB Approche environnementale plus marquée par ceux dont des parcelles sont en zone du	Coopérateurs de Vergèze observés par les coop caves voisines, sans être suivis

	ZP du Vistre (MAEt) Suite à des difficultés ou ceux qui n'ont pas de repreneur : AB exigeante car tous ne peuvent y répondre par manque de réactivité, et surtout du nombre d'ha /personne 15 ha pour une personne jugé suffisant	
Réseaux et interlocuteurs : conseillers Autres acteurs Sources d'information	Le <u>technicien AB de CA30</u> : le coup par coup sur les décisions de traiter (TRES FREQUENT) <u>Agrofournisseurs</u> : Même contenus d'informations que CA30, plus orientés produits et négociation des prix. (TRES FREQUENT) Sessions de formation via <u>CA30</u> et civam bio par périodes <u>Formation initiale</u> des coopérateurs : fac de sciences, BAT-BTSA pour certains <u>INRA</u> pressenti par Perrier en 1992 TRES PONCTUEL <u>Sudvinbio</u> , surtout sur l'œnologie et les marchés, mais a quelques ressources techniques viticoles PONCTUEL <u>Administrations</u> : NON, sauf les élus ou membre de collectivités	Le technicien a fait des vidéos didactiques (personne n'en parle sauf un qui parle d'internet ?) Coopérative Agricole de Provence Languedoc est prestataires maturité et qualité parcelle de la coopérative depuis 2010 . également conseil individuel. A ses propres parcelles de référence pour les comptages, en informent donc les exploitants.
Relations entre pairs	Réunions pour la coopérative, surtout ceux du bureau et conseil d'administration. Permanence sur le point de vente du caveau	2010 changement programmé de directeur : option pour un professionnel compétent et surtout de caractère 2010 Arrivée d'un consultant œnologue, mentor du nouveau directeur, ayant aussi des exigences sur la qualité à la vigne
Autre source d'information	<u>littérature</u> : la Vigne, Viti, Réussir Vigne (envoyés gratuitement), le Paysan du Midi, internet La participation à <u>d'autres structures et associations</u> est source d'information	Référence aux formations initiales
Mesures incitatives	CTE historique pour la conversion en AB Primes PAC de maintien en AB Le statut de salarié agricole (celui qui veut s'assurer la retraite et une bonne couverture sociale) empêche toute prime.	Besoin de nouvelles aides pour le renouvellement de matériel
Evaluation	Changement de pratique récompensée par une valorisation nécessaire et satisfaisante à ce jour. Regrettent le manque de soutien AB initial	Conscience que le demande en AB est inélastique face à l'offre croissante de l'offre.