



SUFISA CEREALS REPORT CASE STUDY IN ILE DE FRANCE AN EXTENDED SUMMARY MAY 2018





Introduction

The purpose of this report is to investigate the policy requirements and market imperfections, and their implications for the resilience of arable crops production in the Region of Île de France, France (see Figure 1), as part of the EU-funded Horizon 2020 project, Sufisa (Sustainable finance for sustainable agriculture and fisheries). This extended summary has been derived from a much larger report, which is available from: https://www.sufisa.eu/publications. Arable crops production in Île de France is an interesting case study to reflect about a situation which has been defined by different authors as being socio-technically locked-in (Magrini et al., 2016). In such situations, long term evolutions of a given production create strong interdependencies between actors, technologies and values, which eventually prevent stakeholders from adopting alternatives – even though their higher level of sustainability has been acknowledged. Large scale / arable crops production systems of Île de France have experienced a radical transformation over the last 30 years with the progressive disappearance of livestock in all farms and a strong simplification of agronomic rotations. While the economic benefits of such an evolution have long been said to be excellent, the overall resilience of those simplified systems is now threaten by increasing climatic and economic risks, themselves due to climate change and increased price volatility of main commodities (rapeseed, sugar beet and wheat), but also to their unsustainable environmental impacts, especially regarding soil fertility. Crop diversification and the lengthening of rotation has been well identified as a key option to counter those negative trends but farmers have so far failed to turn to such practices, mainly as a result of the socio-technical lock-ins (Meynard et al., 2013).



Figure 1: Situation map of the IdF region

What are the conditions that create such lock-ins and what are the strategies developed by farmers to cope with this situation? Are there ways to unlock the situation and if yes, which actions are needed, by whom? While this short report do not pretend to give definitive answers to those questions, it will provide the reader with a general overview of the situation and some preliminary findings regarding the available options to increase the sustainability of primary producers.

To do so, data have been collected during three main phases. A first phase of market and regulatory inventory relied on grey / scientific literature analysis and expert / key informant interviews.

18 interviews were carried out between July and October 2016 and a sum of reports of all sorts were collected. This allowed to map market and regulatory conditions which farmer face in their day-to-day business.

In a second phase, carried out in March and April 2017, group interviews were carried out to (i) confirm the preliminary results obtained from the first phase regarding conditions; (ii) uncover the set of strategies farmers deploy to cope with those conditions and to attain their objectives; (iii) analyse how other actors (supply chain actors, bankers, civil society organisations, local governments and state administration) contribute to (or oppose to) the deployment of farmers' strategies. Two focus groups with farmers have been carried out and one participatory workshop, including stakeholders involved at various points in the functioning of the cereal sector in Ile-de-France.

The third phase was dedicated to rework the whole analysis in the light of the results obtained in the first two phases. This phase was completed by a phone survey aiming at collecting data on the sales agreements between the farmers and the actors of their sales channels, the ability of farmers to address different sustainability issues and their future strategies. This survey was led among 139 farmers. The third phase eventually ended up in the present executive summary, whose remainder is organised as follows. A first section will introduce to the case study and then describe the main conditions (regulatory and market ones) that structure the farmer business environment. The second section will shed light on the various strategies that have emerged at the farm level to cope with this environment.

Presentation of the case study

Ile-de-France agriculture occupies just under half of the regional territory and employs 0.2% of the active population. It is dominated by large farms (115 ha on an average) in which cereal crops are cultivated in rotations including also rapeseed and barley (nearly 2/3 of the agricultural area is cereal, 60% of which is wheat; However, potato or sugar beet are also slightly more developed in the north of the region). These farms, which represent more than ¾ of the Utilized Agricultural Land, constitute the main focus of this case study. They have a certain homogeneity in terms of structure and functioning at the regional scale, although agronomic practices may vary locally. This homogenization results from a movement of rotation simplification and the disappearance of livestock over the past 25 years, which has notably led to a drastic reduction of protein crops in rotations.

Table 1: evolution of main agricultural features in IdF from 1950 to 2010

	1955	1970	2000	2010
Farming area			582 992	569 000
Number of farms	17 680		6 460	5 075

		90	112
100 000			22 060
20 000			4 430
	32 500		6 934
	20 000		100 000 20 000

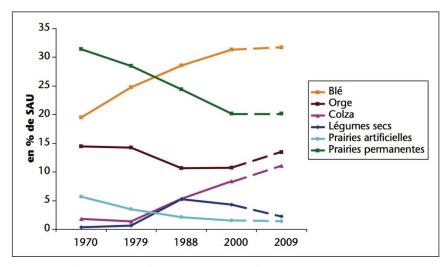


Figure 10. Synthèse de l'évolution des principales occupations du sol du bassin de la Seine entre 1970 et 2009 (source : RGA et enquête Teruti 2009).

Figure 2: Evolution of the main crops in the Seine watershed (including Île de France) from 1970 to 2009 (from Schott *et al.*, 2010)

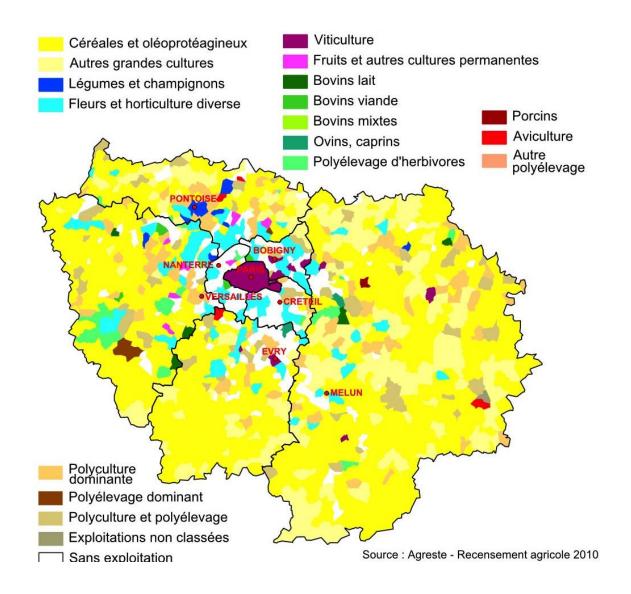


Figure 3: distribution of farming systems by commune in Île de France — in yellow: cereals and oilseed / protein crops farming systems (Agreste Île de France, 2015)

While the farmers of Île de France are among the wealthiest in the country with an average current income before tax of about 30 to 50 k€ / year and a differential of 10 to 20 k € compared to the average national, they have been severely hit by successive climatic events over the last 3 years which have drastically undermined their overall economic balance, especially 2016. The weather and the variability of raw material prices (see Figure 4) are directly involved in this situation. However, farms also have to deal with a growing variety of issues: increased pest resistance (especially on rapeseed), increased price of nitrogen inputs, increasing environmental demands to reduce their impact on superficial and underground water bodies, stronger competition from the Black Sea countries, both on the import market and on the traditional export markets (particularly North Africa). In this context, the regulatory frameworks and the market conditions play a key role in the evolution of farms, their impact in terms of sustainability and their ability to adapt / transform.

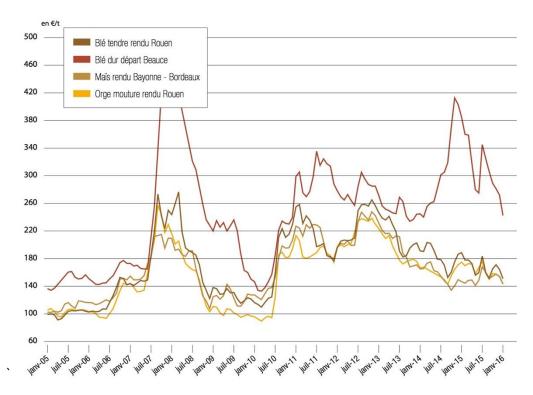


Figure 4: Evolution of main cereal prices over the last 10 years (source Passion Céréales, 2016)

Main conditions affecting farmers' strategies

Regulatory conditions

In terms of regulation, two aspects seem crucial for the future of Île de France's arable farming systems. The first concerns the significant decrease in direct aid to arable crops following the 2013 CAP reform. The choice to reallocate part of the CAP budget to young farmers and small structures as well as the obligation to converge are likely to lead, by 2019, to a reduction in aid received from 20 to 40 % / ha depending on the farms. If justified in the name of a historic rebalancing of first-pillar aid, the consequences of such measures are far from being neutral for Ile-de-France farmers.

A second aspect concerns the development of agri-environmental and environmental measures. The system of conditionalities introduced by the 2003 reform and the greening initiated of the 2013 reform have up until only marginally impacted large farms. While these measures have not favoured changes in agronomic practices, they have been criticized for the administrative complication they have made in the handling of farmers' CAP dossiers. Similarly, the implementation of the Agro-Ecological project of the Minister Le Foll and of the Eco-phyto plan are considered by farmers as mostly administrative burden, with nothing to gain. They have so far had little impact. Nevertheless, and given the environmental issues related to both the quality of water in the Seine-Normandy basin and the drastic fall of ordinary biodiversity in Île de France, a crucial question concerns the type of tools that could be used to foster concrete changes in agricultural practices. The new agri-environmental measures called "systems" could be an interesting tool. Nevertheless, the complexity of implementing Pillar II measures, the amount of aid per ha, still considered too low compared to the efforts to be made, as well as the late payments that are associated with these measures in France since 2015, are for the moment serious obstacles to large-scale adoption in the Île de France region.

Market conditions

In terms of markets, four recent dynamics can be highlighted.

A first dynamic concerns the increasing variability of prices of agricultural raw materials, which directly affect farmers' incomes - upwards or downwards. This variability has led to a complete disconnection between selling prices and production costs. If the development of financial instruments (futures market and options) allows farmers and storage agencies to hedge against, or benefit from, this price variability, it is a risk factor that weighs more and more on the farm management. This evolution of the markets cannot be dissociated from the progressive transformations of the regulatory framework. The gradual liberalization of European agricultural markets following successive reforms of the CAP is, in the first place, one of the important factors contributing to the increase of this variability. The recent development of insurance instruments, in part inspired by North American experiences, is one of the responses proposed to deal with them. In France, political discussions culminated in just over 10 years in a system of premium subsidy insurance for most field crops. This, however, only concerns crop insurance (and not turnover) and has not, so far, met with real enthusiasm on the part of farmers. Thus, a bit less than 50 % of cereal farmers in the IdF region have opted for crop insurance, a figure that has even decreased between 2014 and 2016, putting the risk of a "vicious circle" in the short or medium term: the less farmers adopt insurances, the higher the premiums, and the less the farmers will tend to insure ... etc.

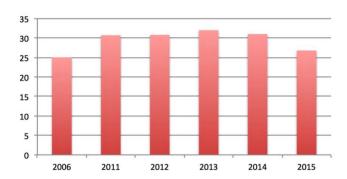


Figure 5: Areas of cereal crops covered by an insurance scheme (in % of the ULA) (source Mortemousque, 2007; MAAF, 2016)

A second dynamic relates more specifically to the wheat market, about 50% of which is exported and 50% consumed nationally. French wheat is known for their bread-making quality, particularly appreciated in North African countries. However, this quality is increasingly competing at low cost with wheat from the Black Sea countries or even Eastern Europe, with higher protein levels and lower prices. This competition is also at play in the traditional markets of France (North Africa), but also in intra-community and, more recently, in the domestic market (with a 2016 effect not to be neglected). The search for quality thus appears to be an increasingly important issue for producers, and is reflected in different ways. A first one is the protein plan, co-sponsored by the public authority and the inter-branch organization. It aims to increase the protein content of French wheat to improve its position on the export markets and limit the risk of competition in the domestic market, in a context where the demand for high protein wheat is steadily increasing. A second way to better valorise wheat relies on the development of direct supply contracts between cooperatives and processors with demanding specifications. A final aspect concerns the possible development of organic crops, for which the premium on the market can reach 60 to 70% compared to the standard

price. Nevertheless, the agronomic issues that this poses and the risk that this represents for producers still constitute significant obstacles to a greater adoption of organic practices, not to mention the fact that too much growth in organic areas could in the short or medium term challenge the current premium, if it was faster than the sharp rise in consumption.

A third dynamic relates more specifically to the rapeseed sector, which represents 12 to 15% of the UAL in Ile de France. Historically structured by a powerful inter-branch organization organized in the early 1980s to cope with the decline in CAP support, the sector has two main markets: biodiesel and animal feed. The market for both products is essentially domestic. Its development has benefited in part from the 1992 CAP reform, introducing industrial fallows, and from a set of measures aiming to develop the biofuel sector (both at the European and national level). Taken together, these measures made it possible to supply crushing plants with cheap raw materials and thus to structure a dynamic industrial sector. While rapeseed meal for animal feed has long been considered a coproduct of crushing with the primary objective of producing oil, the trend could be reversed in the short term. Indeed, the production of biodiesel from rapeseed oil could soon be challenged by the development of alternative industrial processes using palm oil, whose raw material price is now more advantageous. On the other hand, the demand for animal meal remains stable, even increasing, especially in a context where imports of soybeans, particularly from Brazil, for animal feed are increasingly pointed out for their climate change / biodiversity impact.

A fourth and final dynamic concerns the continuous reduction of protein crops in the Ile de France for more than 20 years. The problem is well identified, as well as its consequences in terms of increasing synthetic nitrogen inputs related to the simplification of rotations. The causes are also known: lower yields, lower prices paid to the producer, resulting in a reduction in local storage and processing capacities, which in turn dissuades producers and limits innovations on the seed companies' side, which still contributes a little more stagnant returns. Faced with this situation, the plant protein plan 2014-2020 is expected to revitalize agricultural research and provide farmers with an economic incentive to revive the production of protein crops, hoping to be able to restart a virtuous circle. While it is still early to judge the results, many actors have stressed the timidity of the measures taken and the fact that they are not really at the scale of the real needs of sectors in great difficulty.

Multi-level strategies to cope with contemporary conditions

Farmers – alone or in partnership with other key actors of the sector – have developed (or tried to develop) strategies at two different levels to cope with contemporary conditions: at the farm level and at the collective level (targeting either policy makers or other value chain actors). Most farmers however feel they have almost no margins of manoeuvre given the contemporary regulatory framework. It follows from that that policy makers constitute ultimately one of the main target of very well structured collective strategies.

Farm level strategies

At the farm level, strategies are relatively similar from one farm to another one, at least regarding the main technical orientations of the farming system: the specialisation and enlargement pathway is presented as the "unique" way forward given the national / international context. The well-known environmental impacts of such systems are considered as something than can be managed

marginally. However, no alternative strategies are put forth or developed that would fully address environmental issues.

Given this preamble, three main types of strategies – inside of the current system – have been identified. They of course relate to how farmers involved in collective action, especially in a context where the cereal branch of the majoritarian French farmers union has long been a key actor of the French agricultural political system (Pesche, 2008). One can distinguish between risk management strategies; production costs minimisation strategies; and value-added creation / capture strategies through different market arrangements.

Managing risks: risk-hedging instruments and farm management practices.

The question of how to manage risks – climatic risk as well as price risk – is at the centre of farmers' strategies. Regarding price risk, farmers have the choice between different marketing options. One must keep in mind that they *have* to sell their production to state-recognized storage operators, be they cooperative or private merchants. On an average, cooperatives collect 75 % of the whole cereal / oilseed production in the region. While a farmer adhering to a cooperative has the *moral obligation* to sell all his production *through* the cooperative, this is not always the case and many farmers prefer to use different commercialisation channels and sell to both cooperatives and private merchants.

Farmers have two options when it comes to selling their production: they can either delegate selling operations to the coop to be paid an "average price" at the end of the campaign. Or, they can take the responsibility of the sell by selling strictly "at market price" to the cooperative. A vast majority of farmers choose the "average price" for the sake of convenience. Those who have experienced to sell at market price also explained that in most cases, at the end of the day, it does barely allow to better valorise the production.

Regarding climatic risks, farmers have widely discussed the interest of insurance instruments and, to a lesser extent, of the need to re-think their production system. There were long debates about whether or not crop insurances were needed or not, and if yes, how much should it be subsidized. As of now, farmers receive subsidies that can be up to 44 % of the premium for wheat, and 36 % for oilseeds. Some farmers argued that in the current context of climate change, crop insurances were an essential tool and that it should be further developed. They explained they had been using it for several years and that they were quite satisfied, though improvements are needed – taking, in particular, the North American example. Others, on the contrary, were quite sceptical. Some did try to insure their crop but were not convinced by the tool, finding it either too expensive with respect to the risk against which it hedges. Or they considered that they need other tools that rely more on fiscal principles than on insurance ones; fiscal tools which will allow them to save money during good years, and use that money during difficult years.

Still others did not even try to use insurance tools, considering that what is needed is to develop farming systems more resilient to climatic (and price) risks. Several options were mentioned in that respects regarding in particular the choice of seeds (choosing seeds that are not necessarily the most productive but can produce well in different climatic situations; sowing a mix of varieties rather than having only mono-specific fields) and the rotation of crops (favouring a diversity of crops that will behave differently depending on the weather, rather than focusing on a few productive crops). Relying on greater diversity of crops is also a way to hedge against price risks, as it is hoped that not all prices will go down the same year:

In search of more value-added

As expressed in the quotation above, the question of risk management often relates to that of how to generate and capture more value added at the farm level. Many farmers try to identify and exploit small "niches" that can complement their income and generate more value added. It can take different forms, but it is often through specific contractual arrangements for smaller scale crops (with respect to the overall farm size). Several such niches were mentioned: blé de force for McDo on a couple of hectares; aromatic plants for Darigal on a dozen of hectares; durum wheat or hemp, even though the market for it needs to be further developed.

An other kind of niche is organic agriculture. None of the farmer who took part in our FGs were organic farmers – as organic farming actually represents only 1,1 % of the total area for cereals (Agreste Île de France, 2015). However, some of them explained that they have converted (or they intended to do so) certain plots to organic for strategic / opportunistic reasons (but also because they wanted to see whether or not it could be possible at a larger scale). They mentioned that this can be profitable when subsidies are effectively granted (which is not the case in France on the second pillar since 2016 for administrative reasons), but that they then faced huge fertility problems they did not know how to solve, notably because livestock production has almost disappeared from the area. Hence, organic manure is not easily available and it is costly to bring it from afar.

Controlling production costs (variable and fix): farm size matters!

The last strategic option available to farmers at the farm level is to minimise production costs. Most participants indicated that they have been concentrating their effort on this over the past 5 years, but that they haven't managed to cut costs down as much as they hoped / thought. They pointed out the impact of different norms on their inability to effectively reduce the use of pesticide (less molecules available implies to use them more as their efficiency decreases), or labour costs. Some of them also explained that the enlargement of their farm has led them to massively invest both in machines and in land and that it heavily impacted on their economic equilibrium. Regarding machines in particular, some farmers referred to cooperative for the collective use of agricultural machines (CUMA), which they depicted as credible options to a certain extent only. While CUMA indeed allow to lower fixed costs and investments at farm level, they also reduce farmer's autonomy as he depends on the availability of the machines. Some farmers also mentioned that they partner with their neighbour to collectively buy specific / expansive equipment. They presented it as a more flexible way to reduce investment costs than CUMA but still quite effective.

An agricultural accountant also recalled that many of his clients have over-invested to take advantage of the fiscal regulation. Such over-investments generates high fixed costs which farmers can't compensate only by diminishing variable production costs.

Those discussions led to a debate on farm sizes: are large and specialized farms more competitive than smaller ones? For most farmers around the table, French farms are not competitive (notably vis-à-vis their eastern Europe counterparts) because they are too small:

Another farmer answered that in his area, accountancy data clearly shows that smaller farm (150 to 200 ha) perform better, in economic terms, than larger ones. Hence, some participants came to question what they presented as an "accepted wisdom" which basically considers that competitiveness is essentially a matter of farm size. As such, the broader enlargement /

specialisation strategy, widely (if not exclusively) adopted in Île de France over the last 30 years was also questioned by some – not all – participants. They notably argued for the need to re-think such strategic options in the light of their impacts on the capital intensity of farms. To them, decreasing farms size could favour not only their transmission, but also and above all, a slight decrease in fixed costs.¹ On the contrary, the tenants of the enlargement strategy pointed out the economies of scale such a strategy allows for. They argued, in turn, that French farmers and themselves in particular were lacking competitiveness compared to eastern Europe precisely because they were not able to make enough economies of scale.

An analysis of the survey data allowed us to complete the information on farm strategies through the analysis of a large sample of farms. In coherence with our field observations, no relationships were found between farms characteristics (in terms of size and level of specialization) and the strategies adopted or planned. In line with those results, the data collected also shows that farmers do not consider that selling to cooperatives or to private merchants makes a big difference in their ability to address a variety of sustainability issues (Figure 6). This analysis also tends to confirm the fact that most farmers tend to consider themselves in a difficult situation, with a difficult future to cope with. The number of farmers that intend to contract a crop insurance is quite high compared to what was discussed during our focus groups and workshops. One explanation to that result could be that despite the fact the insurance tools are not very popular among farmers, they are still considered to be representing one of the most solid solution to difficulties some farmers are going through.

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¹ The question of specialisation is probably more complex, as in today's farming sector, each crop relies on

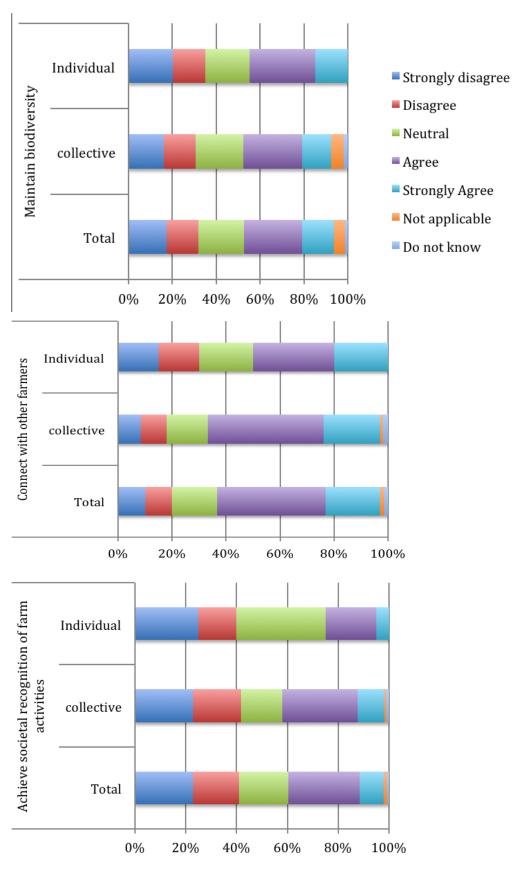


Figure 6: Type of sustainability issues that sales agreement allow (or not) to address, disaggregated by sales channels

The most important drivers of farmers' strategies seem to be well captured by the survey, the CAP and more generally the regulatory framework being one of the most structuring one, along with market prices (Figure 7). The role of market prices being itself a consequence of 20 years of evolution of the CAP and the regulatory framework.

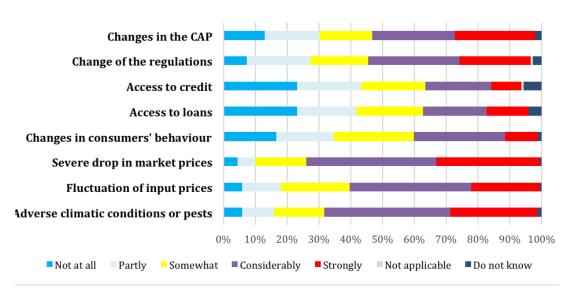


Figure 7: Perceived influence of different factors on farmers' strategies

Collective level strategies

Collective action amongst cereal farmers is ancient and well structured. As of today, it takes three main forms that tend to reinforce each other: developing / managing collaborative learning processes to share experiences and learn from each other; developing upstream segmentation tools to retain more value added at the farm level and regain consumer's trust; and lobbying policy makers through a broad variety of channels.

Developing collaborative learning processes

Over the last 20 years, the agricultural chambers of Île de France have promoted collective learning processes through the establishment of "Development agricultural groups". Those groups are coordinated by an agricultural technician of the chamber and gather up to 20 farmers. They meet on a regular basis to discuss specific topics, such as, for example, conservation agriculture / no till practices, pesticide and mineral fertilizer reduction, crop rotations strategies... The technician brings his expertise to the group and help in taking stock of each participants' experience, notably by putting it in perspective with the best available knowledge. The importance of those groups has been highlighted by many participants as it clearly helps them to identify best practices and how to implement them. This has also been said to be of particular importance in a context where many farmers feel lonely in their day to day business and need support, as reported below:

Segmenting markets upstream to retain more value added at farm level and regain consumer's trust

Through their cooperatives, farmers also invest in upstream market segmentation. As said before, cereal and oilseed are highly commodified crops and it is therefore difficult to capture or generate greater value at the farm level. One way to overcome this has been to work on supply chain organisations in order to increase their level of transparency for consumers, and be able to trace /

label the origin of most raw ingredients back to farm gate in simple end-consumption products, such as bread, table oils, pasta, or yoghourt (in other areas)... This has been possible thanks to the vertical integration of many cooperatives that, on the one hand, collect raw products at farm gate and, on the other hand, use it in the make up of end-consumption products through the subsidiary they control. Two processes can be mentioned here, as they have developed over the last 10 years or so: Agriconfiance, which is led by Coop de France and concerns three cooperatives of cereals in the Île de France region; and Agri-éthique, led by two cooperatives. Both initiatives concern today a few thousands of farmers all over France, and probably a bit less than thousand in the Île de France region. While the idea of such initiatives is to increase the "value" of raw products and allow for a better remuneration of farmers, it has been difficult so far to assess their real impact on prices paid at farm gate. While they have been cited as a key option for the future, they seem to be far less effective than "tradition" collective mobilisation targeting policy makers. We now turn to this last type of collective strategy.

Lobbying policy makers to defend collective interests

Over the years, cereal farmers have developed privileged access to policy makers, in particular in Île de France, as they are geographically close to Ministries and administration centres. This is particularly the case of the majority farmers union and its two specialized sections for cereals and oilseed crops, namely the AGPB (Association générale de producteurs de blé / General association of wheat producers) and the FOP (Fédération des producteurs d'oléoprotéagineux / Federation of oilseed and protein crops producers). Both organisations are more than 50 years old and have a well established position in all political negotiations that concern agriculture. They notably defend the need to maintain a strong pillar one in CAP subsidies, and to avoid any environmental regulations that limit farmers' entrepreneurship.

While farmers did not spontaneously address such political aspects, they were keen on recognizing the centrality of the union when they were asked about. This was also the opportunity for the only farmer adhering to the minority union active in the field of cereals and oilseed production (the coordination rurale, through its specialised association OPG / Organisation des producteurs de grain / Grain producer organisation) to have his voice heard and to mark some distance with the positions usually defended by the AGBP and the FOP. In particular, he stresses the fact that the OPG does not believe in the fact that the "vocation" of French agriculture is to export and feed the world, but that they should rather concentrate on the national market and stop produce commodities to generate and capture more value added at the territorial level. He was however quite cornered by other participants who were all adherents to the majoritarian union. Interestingly, the political position of the OPG adherent was quite well reflected in his technical choices. He was indeed amongst those that clearly emphasizes the need to carefully examine the most common farm development pattern (enlargement / specialisation) in order to shed light on the potential benefits of alternatives (despecialisation, re-introduction of livestock through associations between cereal growers and cattle breeders...).

Conclusion

The situation in Île de France is marked by an apparent homogeneity in farmers' strategies at the farm level. For most farmers, there is no alternatives to the "enlargement / specialisation pathway" that has been adopted over the last 30 years. In this context, existing strategies at both the farm and collective levels are not able to counter the very negative situation in which farmers are. What farmers rely on the most is thus political action: changes in the policy framework would be, for most

of them, the most effective way to regain economic margins of manoeuvre in a context where the dominant mode of farming is considered as the only way forward.

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