

UNDERSTANDING THE IMPACT OF THE COMMON AGRICULTURAL POLICY ON DAIRY FARMERS



THESIS:

UNDERSTANDING THE IMPACT OF THE COMMON AGRICULTURAL POLICY ON DAIRY FARMERS

Written by Maëva CADO

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European Engineer Degree, AERES University of Applied Sciences, Dronten

Written with the guidance of Mr Van Beekhuizen

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PREFACE AND ACKNOWLEDGEMENTS

As part of the study program Bachelor Livestock Production at Aeres University of Applied Sciences Dronten, I had to conduct a research project linked to one or several courses offered in the program. The research project results in a thesis written during the placement in the first semester of the second year at the Aeres University. The present report constitutes the thesis for the final report.

The topic of Common Agricultural Policy was chosen following my interest about it and its broad field of application. Moreover, the subject chosen is an important theme for farmers and the current changes (CAP 2021-27) make it significantly more interesting.

I would like to express my sincere gratitude to the people who supported me during the writing of this Bachelor thesis. First of all, thank you to Mrs. Judit Kühl for giving me the chance to do an internship at European Dairy Farmers and Mrs Steffi Wille Sonk for guiding and providing me advices through the whole exercise. Then to Mr. Jan Van Beekhuizen for guiding me in the writing of this thesis. And at last, I would like to thank all the persons who takes part in this study.

Summary

The Common Agricultural Policy (CAP) is actually discussed at the European level. The impact of the new CAP will be important for European dairy farmers. Having knowledge into it is important in order to know what farmers are expecting for the future CAP reform. Moreover, the main objective was to understand better the dairy farm development in relation to the CAP. This study first provides information about the different countries and their CAP implantation. Then, the influences which have promoted the changes in dairy farms are defined. After that, this paper is looking at the farmer's CAP opinion in link with their farm structures, number of cows and hectares. Finally, the expectations of dairy farmers and dairy specialist are presented and discussed.

To conduct this study 4 European countries were taken into consideration: Germany, France, Ireland and Sweden. Dairy farmers from the four countries were asked through a survey and specialists were interviewed. This was done in order to answer the main question which was: "Does the EU-subsidies influence dairy farmers?" To answer this main question, sub-questions were defined to help providing an answer to the main question:

- How has the way of farming changed over the last years?
- What triggered these changes in the dairy farms?
- Is there a difference on CAP opinion according to farm structure?
- What are the expectations of farmers and dairy consultants for the new CAP 2021-2027?

The results suggest that dairy farmers evolved in favour of animal welfare and environment. Moreover, dairy farmers are also concentrated on improving the efficiency of resource used. The personal conviction of dairy farmers was the first reason of changes in dairy farm over the last 10 years. The CAP impact through the cross compliance is not a topic that have a strong influence on dairy farmers, but CAP payments remain important to them. Farmer's answers suggest that they are willing to improve their practices on animal welfare, environment, climate changes but CAP have to support them to changes. Finally, farmer's need to be support by all the persons involved in this process, specialists, advisors, associations to make the CAP simpler and to help farmers and the CAP to handle their respective and common challenges.

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Chapter 1 : Introduction

1. Common agricultural policy

Sheep grazing in Ireland, wine area in France, large arable field in Eastern Germany or small-scale farm in Romania: the EU farming is diversified in all points. Farming has been influenced by ecological condition, culture, history and economic development but farming had also influenced them. In fact, 175 million of agricultural lands are constituting the landscape of the European farming, that represents 40% of the total EU surface. (Bartz et al 2019)

The economic contribution of farming is changing considerably from a country to another. The EU average was 1.4% in 2017, in the new Member States this average was above 3% instead of 1 to 0.5% in the occidental countries. None of the other economic field of the EU is influenced by common rules as farming and farmers are, due to the Common Agricultural Policy. (Bartz et al, 2019)

a. Historical development of the Common Agricultural Policy

Launched in 1962, by the original six Member states of the European Economic Community. The objectives of the CAP were set out from the Treaty of Rome. These objectives were to increase agricultural productivity, to stabilise markets, to provide certainty of supplies, to ensure that supply reaches consumers at reasonable prices and to ensure a fair standard of living for the agricultural community. (Zoob, 2001)

Until the 1990s the core element of the CAP was price support, secured with a high level of market protection via guaranteed prices, border protection and market intervention. However, the use of price and market instruments led to a major overproduction in the common market as well as an increase in expenditure and was a significant cause for major distortions on the world agricultural market. (Matthews, Salvatici & Scoppola, 2017)

To find a solution to these issues, the quota system was originally introduced in 1984 as a way of limiting milk production and stabilising milk prices as well as other productions (sugar, wine, arable crops and ruminant livestock). Prior to that, EU farmers had been granted a certain price for their milk, a price that was significantly higher than that on the world market. After the introduction of the quotas, the Member States had two limits to handle: one that defined the maximum amount of milk delivered to dairies and one that defined the maximum amount sold at farm level. (Witzke et al, 2009). The various measures which have been taken during that time (including milk quotas) failed to provide a long-term solution to these issues. (Matthews et al, 2017)

The starting points for the most fundamental reform were the internal imbalance within the CAP and the negative multiplier impact of policies. The pressure for reform appears from the common budget and commitments to cut tariffs and overall support levels under the GATT (General Agreement on Tariffs and Trade) Uruguay round in 1986–1994. Environmental aspects, animal welfare and food safety started to receive more attention, while less attention started to be given to self-sufficiency and farm income-oriented policies objectives. That's why the MacSharry reform was led to give prices a stronger role in determining production. (Arovuori & Yrjölä, 2015)

In 1992, when the MacSharry reform took place this one brought direct area and animal-related payments to the centre of the policy. Animal-related direct payments were introduced as payments per head of livestock. The total amount of these payments was limited to predetermined maximum eligible livestock numbers. As part of the MacSharry reform, the implementation of the environmental support scheme started in 1992. The voluntary environmental support scheme introduced conditional direct payments targeted to compensate the costs and income losses incurred from the implementation of a particular environmentally- oriented production practice or measure. Since then, direct payments have been the dominant policy instrument in the CAP. (Arovuori and Yrjölä, 2015)

Later, the Agenda 2000 reform made a step further to reduce market distortions with the introduction of additional prices cuts and an increase in direct payment expenditures. The agenda 2000 reform led to the creation of the architecture of CAP into two pillars as it is known today. The 1st pillar is based on the classic objectives such as market management and farm income support. The 2nd pillar aims to improve agricultural structures and agri-environment measures and measures to improve quality of life in rural areas. The division of the CAP into 2 pillars still exist but with an increase on the importance of the 2nd pillar over the time. (Matthews et al, 2017)

In the 2003's reform, the direct payments were reduced by 5%, this 5% were transferred to the rural development (2nd pillar). The direct payments were transferred to the single farm payment scheme and finally decoupled from the current production. The levels of the single farm payments were based on historical payment entitlements that were decoupled from the level of current production. This reform also made compulsory the cross compliance for the receipt of payments meaning that farmers had to respect animal and plant health, food safety, environmental and animal welfare standards as well as minimum requirements for ensuring the "good agricultural and environmental condition". The reform of 2003 introduced fundamental changes in regard to the direct payments besides to the announcements of the abolition of milk quota in 2015. (Matthews et al, 2017)

In the 2003's reform, the Commission decided that the milk quotas would be abolished from the 1 April 2015. Over the years, it has become clear that the milk quota system is distorting the market and maintaining milk production in less competitive regions. To handle this decision in a soft way for the milk sector, the Commission proposed to increase the quotas by 1 per cent annually between 2009 and 2013. (Witzke et al, 2009)

The latest reform took place in 2013 and is still running. The EU via this reform wanted a fairness CAP with the distribution of direct payments. It was also a "green reform" with the creation of direct payment to greening payment to farmers with good environmental practices as shown in the figure 1. A focus was made on young and small farmers with more targeted support. This reform gives more flexibility to Member States in the way they want to implement these measures and aimed to be more efficient and simpler. (Matthews and al, 2017)

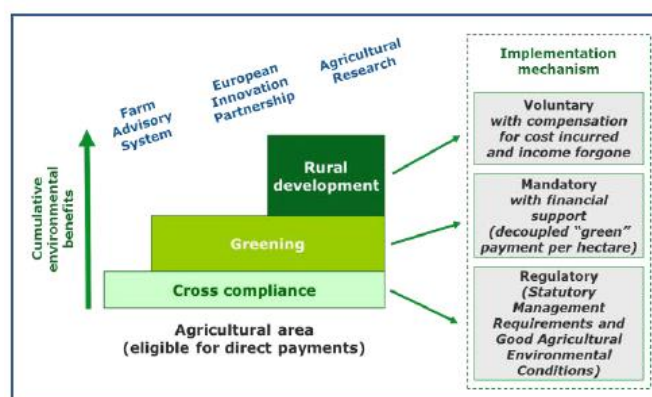


Figure 1- Greening architecture of the CAP

Historical development of the CAP (1962 →)

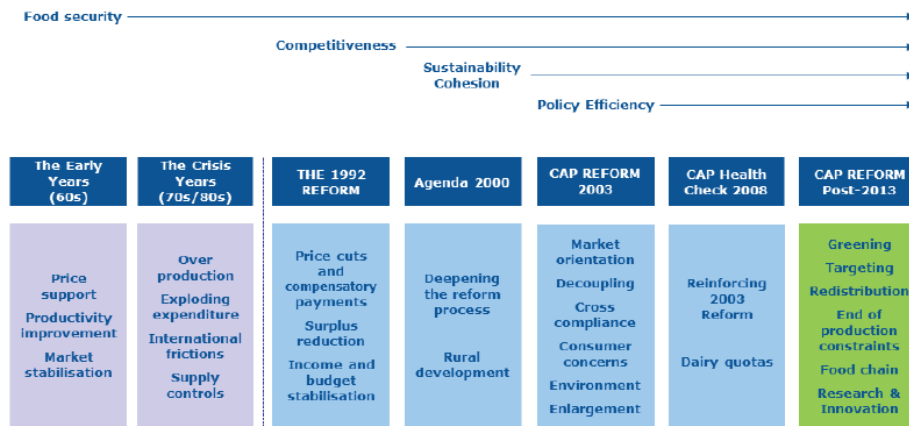


Figure 2 – Historical development of the CAP (1962 →)

Over the years CAP have changes and evolved in order to be more efficient and to answer challenges of the EU agricultural sector, the changes over the year is resume in the figure 2. Currently, the EU is discussing the new Common Agricultural Policy for 2021-2027, this new policy is facing new challenges such as food security, climate change, bioenergy and societal expectations on issues such as animal welfare, food safety... The CAP has also to guarantee a fair standard of living for farmers and must stabilise markets. (EPP, 2017) The different goals for the next CAP 2021-2027 are resume in the table 1.

The ongoing discussions today are about the budget cuts foreseen in the CAP for the period 2021-2027 due to Brexit mainly. Given that the UK has been the second largest net budget contributor of the EU budget. The European Commission already proposes that the funding of the CAP will be reduced by 5% due to the less contribution. (European Commission). The other discussions are about the scope of the national strategic plans, which could be very different and may fail to meet objectives set at European level, especially at the environmental level. (European Parliament, 2019)

The future CAP will have to address and contribute to the UN 2030 Agenda for Sustainable Development goals (SDGs). Many of the SDSs have a direct relevance to agriculture as SDS 2 commits to end hunger, achieve food security and improved nutrition and promote sustainable agriculture. SDG 12 commits to ensuring sustainable consumption and production patterns by 2030, including sustainable management and efficient use of natural resources. SDG 13 undertakes to take urgent action to combat climate change and its impacts. SDG 15 sets out to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. (Matthews, 2018)

Table 1- The proposed general and specific goals of the CAP in the period 2021-2027

Fostering a smart and resilient agricultural sector ensuring food security	Bolstering environmental care and climate action and contributing to the environmental- and climate-related objectives of the EU	Strengthening the socio-economic fabric of rural areas
(1) Support viable farm income and resilience across the EU territory to enhance food security	(4) Contribute to climate change mitigation and adaptation, as well as sustainable energy	(7) Attract young farmers and facilitate business development in rural areas
(2) Enhance market orientation and increase competitiveness including greater focus on research, technology and digitalisation	(5) Foster sustainable development and efficient management of natural resources such as water, soil and air	(8) Promote employment, growth, social inclusion and local development in rural areas, including bio-economy and sustainable forestry
(3) Improve farmers' position in the value chain	(6) Contribute to the protection of biodiversity, enhance ecosystem services and preserve habitats and landscapes	(9) Improve the response of EU agriculture to societal demands on food and health, including safe, nutritious and sustainable food, as well as animal welfare
Fostering knowledge, innovation and digitalisation in agriculture and rural areas		

Source: Erjavec et al, 2018

b. 1st pillar: Direct Payment to farmers

The first pillar is covering the price support interventions and direct payment focused on support to farm incomes. The first pillar is 100% funded by the EU budget. It's based since 2003, on a system of multi-purpose payments with seven components:

- ❖ The basic payment per hectare, the level of which is to be harmonised according to national or regional economic or administrative criteria and subject to an internal convergence process **(Compulsory Payment)**
- ❖ The greening payment is an additional support to offset the cost of using environmentally friendly practices that are not remunerated by the market. This green payment is composed with 3 measures: Crop diversification, maintaining existing permanent grassland, maintaining an "ecological focus areas" **(Compulsory payment with flexible application)** The member states must use 30% of the total direct payment allocations to the greening payment scheme.
- ❖ Additional payment for young farmers (newcomers under 40 years of age established in the previous five years) **(Compulsory Payment)**
- ❖ Redistributive payment whereby farmers may be granted additional support for the first hectares of farmland **(Voluntary payment)**
- ❖ Income support in areas with natural constraints **(Voluntary payment)**
- ❖ Coupled payment linked with specific production **(Voluntary payment)**
- ❖ Small farmers payment, payment up to 1250€ **(Voluntary payment)**

c. 2nd pillar: Rural development policy

The 2nd pillar of the CAP is used for the rural development policy, it was introduced as mentioned above with the Agenda 2000 reform. The second pillar is co-financed by the EU and regional and national funds. The main purpose of this policy is to promote sustainable rural development. The EU commission has established 3 main objectives:

1. Fostering agricultural competitiveness
2. Ensuring sustainable management of natural resources and climate action
3. Achieving balanced territorial development of rural economies and communities, including the creation and maintenance employment.

Those main objectives are translated into six EU priorities for rural development policy. These priorities are described in the table 2.

Table 2- EU priorities for rural development policy

Priority	Focus area
1. Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas	1a) fostering innovation and the knowledge base in rural areas; 1b) strengthening the links between agriculture and forestry and research and innovation; 1c) fostering lifelong learning and vocational training in the agricultural and forestry sectors;
2. Enhancing competitiveness of all types of agriculture and enhancing farm viability	2a) facilitating restructuring of farms facing major structural problems, notably farms with a low degree of market participation, market-oriented farms in particular sectors and farms in need of agricultural diversification; 2b) facilitating generational renewal in the agricultural sector;
3. Promoting food chain organisation and risk management in agriculture	3a) better integrating primary producers into the food chain through quality schemes, promotion in local markets and short supply circuits, producer groups and inter-branch organisations; 3b) supporting farm risk management;
4. Restoring, preserving and enhancing ecosystems dependent on agriculture and forestry	4a) restoring and preserving biodiversity, including in Natura 2000 areas and high nature value farming, and the state of European landscapes; 4b) improving water management; 4c) improving soil management;
5. Promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors,	5a) increasing efficiency in water use by agriculture; 5b) increasing efficiency in energy use in agriculture and food processing; 5c) facilitating the supply and use of renewable sources of energy, of by products, wastes, residues and other non-food raw material for purposes of the bio-economy;
6. Promoting social inclusion, poverty reduction and economic development in rural areas	6a) facilitating diversification, creation of new small enterprises and job creation; 6b) fostering local development in rural areas; 6c) enhancing accessibility to, use and quality of information and communication, technologies (ICT) in rural areas.

Source: European Commission

Rural development policy is implemented through rural development programmes designed by Member States. These programmes apply a personalised strategy to answer the needs of Member States. Strategies must relate at least four of the six priorities mentioned above. (European Union, 2017) The commission approved in 2015, 118 rural development programmes drawn up by the 28 member states. Most of the Member states have chosen to implement a single national programme, eight have opted to use more than one programme in order to fit with their geographical or administrative structures. The measures who are chosen most commonly from the EU “menu” are physical investment (23% of total public spending) agri-environment-climate measures (17%) and payments for areas subject to natural or specific constraints (16%) (European Parliament, 2019)

2. Implementation of the CAP in the EU countries: Focus on 4 countries

This study focused in 4 European countries (as France, Germany, Ireland and Sweden). The purpose of this decision was to get a deeper approach of the CAP impact in these countries. Otherwise, taking into consideration all the EU countries wasn't suitable with the time and the material available. Therefore, Germany, France, Ireland, Sweden were chosen based on their difference in term of development, CAP application, and the context of the Dairy sector at national level.

France and Germany are the largest dairy producers in the EU but they also have different ways to implement the CAP and the farm structure differ especially with the Eastern Germany. Instead of these two countries, Sweden is a minor dairy producer, but the government is trying to stop the decline of the milk production through several national subsidies for dairy farmers. The last country, Ireland, is developing very positively with regard to milk production volume and they have no national subsidies for the milk sector. In this study, the choice to do not take an Eastern EU country was made due to the technical barrier.

Eastern countries have great possibilities to develop their milk sector and it represents an interesting country, but it was decided to do not take one into consideration. In fact, there are only few farmers from Eastern Countries within EDF and the language barrier was also taken into consideration. These barriers lowered the chance to get enough response to have a representative sample.

a. Farming in the EU

Over the last decades the European dairy farm sector went through a tremendous structural change. The sector is composed with more than 700 000 farmers across Europe and it's one of the most profitable part of the European Agriculture. The European Union is one of the world's leading exporter of dairy products. (EDA Column, 2017). In total in 2015, 151.6 million tonnes of milk were produced within the EU 28. The figure 4 shows that Germany (31.9T), France (25.3T) and Ireland (15.2T) are 3 big producers. Some of the EU countries had a strong increase in scale of production over the years, Italy, Denmark, Germany and Ireland have experienced the strongest increase. In the all EU, the average milk production per cow per year increased to 7 075 litres in 2016. (6 610L in 2013) (Cniel, 2019) EU farms are more today productive but they also have to put efforts on greening along with the increase of organic productions and lands over the last years.

Farming tends to be greener, by the end of 2016, 291 326 farms cultivated roughly 11.2 million HA of organic land in Europe. The number of organic farms increased, 3.4% of the EU dairy herd was organic in 2016. Sweden is the second largest country in term of organic land with more than 18.2% of the total land. (Agence Bio, 2017) More than 797 000 dairy cows were certificated as organic in the EU in 2016 (+0.5% compared to 2015), it's represents 3.4% of the total EU herd. The collect of organic milk is estimated at 4.2 million tonnes in 2016. 58% of this collect is done in Germany, France, Austria and Denmark. Organic production is today perceived as one answer to the climate and societal challenges faced by the European farming sector. (Agence Bio, 2017)

The challenges farmers faced are multiple with manifold of factors, the CAP attempt to evolve in order to respond to farmer's challenges. Availability of labour and land, price volatility, societal demands are today the main challenges for many farmers over Europe. Farms and farmers adapt themselves through different ways such as productivity increase, organic production, use of innovative technologies, effort on welfare and environmental impact... (EDF, 2018)

b. Comparison of the agriculture and agriculture development in 4 EU countries

Table 3- Characteristic of the agriculture in 4 countries.

Country	Germany	France	Ireland	Sweden	EU28
<i>Characteristic of farming (2017/2018)</i>					
% of dairy in agriculture	20.8	13	28	20.6	*
% agricultural employment	1.3	2.6	5	1.8	4.2
Agricultural land	16 687	29 101	4 470	3 011	178 662
% Organic Farming Area	6.8	6	1.7	19.2	7
NB dairy cows *1000	4 199	3 595	1 343	323	23 062
NB farms *1000 (2014)	79	93	18	5	1 485
Average milk production/cows/year/kg	7 729	6 889	5 790	8 637	7 075
Production *1000	32 598	25 008	7 499	2 817	164 750
Milk prices	357.5	357	360.9	356.8	*
<i>Subsidies 2014-2020 (Billion)</i>					
Country	Germany	France	Ireland	Sweden	EU28
Total subsidies	44.1	63	10.7	6.6	408.31
1 st pillar	34.7	54	8.8	4.9	308.73
2 nd pillar	9.45	11.4	2.2	1.8	99.58
Private and public funds	*	*	Yes	Yes	

Source: CNIEL, European Union, Eurostat, 2017

a. Agriculture and farm development in Germany

Germany is the main dairy producer in the EU, the production is representing 20% of the total milk production in the EU. At a national level, milk production represents 19% of the total agricultural production in Germany.

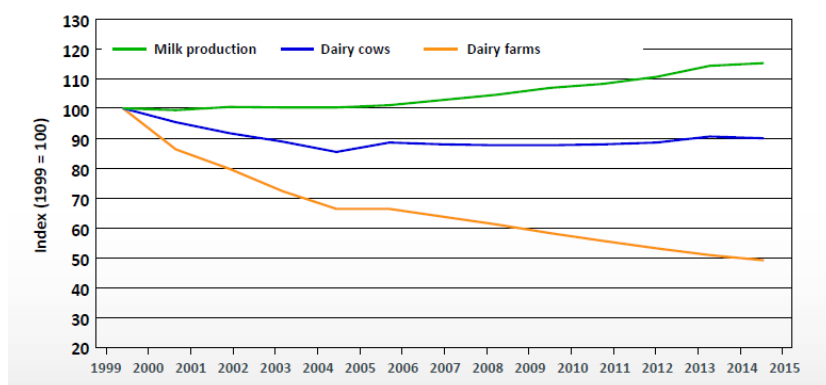


Figure 3- Evolution of the milk production, number of cows and dairy farms in Germany between 1999-2015

Dairy production in Germany have increased over the years, however the number of dairy cows is stable. The figure 3 shows that the number of farms has decreased almost by 50% in 15 years. The figure 3 traduced a higher productivity of the German farms as well as an important concentration of the farms. Dairy farms in Germany tend to enlarge but one of the German particularities is the difference of farm structure between the Eastern and Western part. As an example, the average number of dairy cows of German's farm is about 57 dairy cows/farm. In the Western part this average is down to 50 dairy cows/farms instead of 187 dairy cows/farms in the Eastern part of Germany. Regional contrast is one of the challenges that German CAP have to handle, in order to limit distortions within the regions. (Lindena, 2016)

Today, the main challenges of the German Dairy sector are the increase of market volatility and land prices. They are also struggling with the availability of qualified labour. One of the biggest issues today in Germany is to reach the demand of consumer, politics... such as sustainability, animal welfare, environmental issues. The implementation choices of the German CAP are today made in order to feet challenges of the German farming (Lindena, 2016)

The implementation of the CAP in Germany was influenced by the regional disparity and the need to maintain a fair distribution of the EU funds across the German regions as much as possible. The equal distribution between the region is done under Pillar 1, with no capping and degressive supported in order to avoid losses to East Germany and keeping payment fully decoupled to limit the distortions within the different regions. That's why Germany didn't implement coupled payment under pillar 1.

The political context was also playing a role in the implementation of the CAP as the ministries were pushing for more greening with the need for environmental preservation and support for small farmers with a maximum of 1250€ per farm. Germany also allowed 7% of the national envelop to Redistributive payment providing a

supplementary payment for all beneficiaries of 50 EUR/ha for their first 30 hectares and 30 EUR/ha for every subsequent hectare up to 46 hectares. (European Union, 2016)

The second pillar gave more power to the member states and regions in order to meet the diversity of farming in Germany. Under pillar 2, the objective of sustainable management of natural resources received a lot of attention. The investment aids are strongly linked to environmental and animal welfare standards. The authority has implemented 13 regional Rural Development programmes, which correspond to the various Länder (with two joint programmes). In some regions over 40% of Pillar 2 funds are dedicated to AECM and organic farming. The objective of reaching a balanced territorial development was a priority. The primary responsibility of the 16 regions is to effect structural and demographic change in rural areas. Minimising regional distortions, in particular with respect to East and West Germany, is a priority. Pillar 2 is often used to compensate for declining ERDF funds, while many areas see a strong focus on LEADER, broadband internet and rural development. (European Commission, 2016)

Overview of the CAP in Germany:

- Pillar 1: (4.5% transfer from Pillar1 to Pillar2)
 - o Basic payment scheme 62%,
 - o Small Farmers Scheme implemented;
 - o Basic Payments at a national flat rate payment in 2019;
 - o Flat greening payment and 17 EFA types, 64% of PG designated as environmentally sensitive;
 - o Voluntary Coupled Support not implemented;
- Pillar 2: The majority of the are allocated to M10: Agri-environment-climate (35,4%), M4: Investments in physical assets (28,0%), and M7: Basic services and village renewal in rural areas (26,8%). At aggregated level, 50% of the planned expenditure will go to Priority 4.

b. Agriculture and farm development in France

France is the second milk producer of the EU after Germany. France dairy farming is concentrated into the region of the north western France, the 3 regions Bretagne, Normandie and Pays de la Loire have produced 47.1% of the total milk production in 2017 (Cniel, 2017). France like Germany have a contrasted farming landscape within its territory. In the last 30 years, the number of farms in France has been divided by 5, it raises today around 61 800 farms as shown in the figure 4. Indeed, the figure 5 shows an increase in milk production per farm. The average of cows per farm is 59 cows (Cniel,2018) Farming in France is also characterise by its high number of farmers who are above 50 years. Farmers under 40 years correspond to 20% of the total farmer's population. (Institut de l'élevage, 2010) The question of succession is really importante in this country, the strongest decline in the number of dairy farms in EU occurred in Italy (-80%), Denmark (-78%) and France (-73%). (Berkum & Helming, 2006) France have to put a special effort in terms of generational renewal.

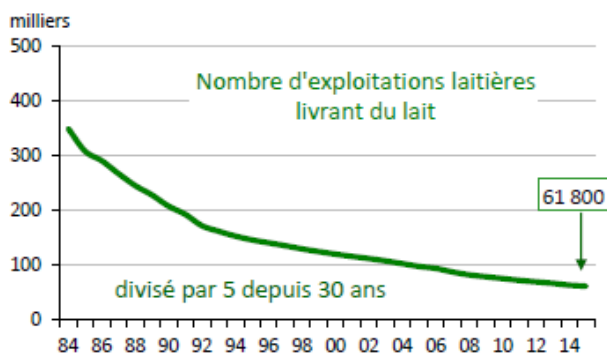


Figure 4- Evolution of farm number in France between 1984 and 2014

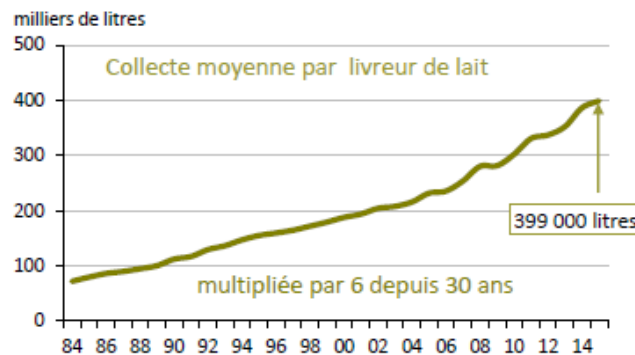


Figure 5- Evolution milk production per farm in France between 1984 and 2014

The main objectives of the implementation choices in France were to receive the maximum return from the EU budget and to retain coupled support at the maximum level. The legitimacy of Direct Payments was supported through greening, internal convergence and the animal husbandry sector would receive support through coupled payments. Voluntary coupled supports were applied in 11 sectors (beef & veal, cereals, fruit & vegetables, hemp, hops, milk & milk products, protein crops, cereals, seeds, sheep meat & goat meat, starch potatoes and rice). France also puts attention to distribute the payment per hectares more equitable which mean a shift from the North of France to the South of France.

In France rural development is implemented through 21 regional RDPs . The National Framework (NF) outline a group of measures that will be programmed in all the regional programmes as they represent national priorities. These are: the setting-up of young farmers, implementation of agri-environment-climate measures, the management of Natura 2000 sites, the promotion of organic farming, and the support to a refacing natural constraint. Under pillar 2, the priority was put on supporting the mountain areas (M13), with lower amounts of attention to the AEC schemes. The priority was mainly to support employment and maintain jobs in rural areas, in particular mountain areas and to support livestock farm holdings. Under Pillar 2, this was mainly addressed through support modernisation and increasing the competitiveness of farm holdings, especially in the livestock sector. (European Union, 2016)

Overview of the CAP in France

- Pillar 1: (3.3% transfer from Pillar 1 to pillar 2)
 - o Basic payment scheme from 49% to 34%
 - o Small Farmers Scheme not implemented, Redistributive Payment for the first 52 ha;
 - o Voluntary Coupled Payments implemented at 15% of the Pillar 1 budget;
 - o Individual Greening payment with 18 EFA types and equivalent practices, 63% of permanent grassland designated as environmentally sensitive;
 - o Regional implementation of BPS with partial internal convergence;

- Pillar 2: The highest aggregated amounts are allocated to M13: Payments to areas facing natural or other specific constraints (35,61%), M4: Investments in physical assets (17,56%), and M10: Agri-environment-climate (9,87%). 28 RDPs are implemented in France, overall 55% of the funding is currently planned under Priority 4, which is closely related to the substantial amount of planned expenditure under M13 support for areas with natural constraints which receives at the aggregated level the highest share of budget (36%).

c. Agriculture and farm development in Ireland

The Irish dairy sector is being rapidly transformed. After the abolition of the milk quotas in 2015, Ireland has used the freedom to produce and the market demand that exists. The figure 6 shows that the Irish milk production has increased by almost 50% since 2009. Ireland has seen its agriculture being more intensive, concentrate and specialise. Traduced by a diminution of farm's number who have drop from 60 000 to 17 500 farms. But at the same time the farm size has increase with an average number of cows of 64 dairy cows in 2016. At the same time the average production per cows have also increase from 3 800L up to 5 200 litre in 2016 as shown in the figure 7. (Delaby, Chatellier, Dumont & Horan, 2017)

The need for a viable food industry has informed decisions to implement only partial convergence of basic direct payments, a large proportion of the Rural development budget were used to payments for areas with natural constraints, and to encourage adequate supplies of protein crops through coupled payments (0.2% of the direct payment envelope). Ireland decided to limited amounts for direct payment at 150 000 euros per individual farms. (European Commission, 2016) Direct payments from CAP play a critical financial role in maintaining farm incomes in Ireland with large differences across farming sectors. The average total CAP payment received per farm in 2017 was €17,659 and this accounted for 56% of average farm income. Dairy enterprises have in average the highest income (€86,069) and the lowest dependency on direct payments (22%). (Parliamentary Budget Office,2018)

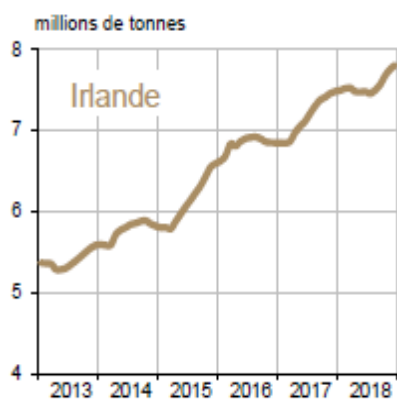


Figure 6- Evolution of the milk production in Ireland 2013-2018

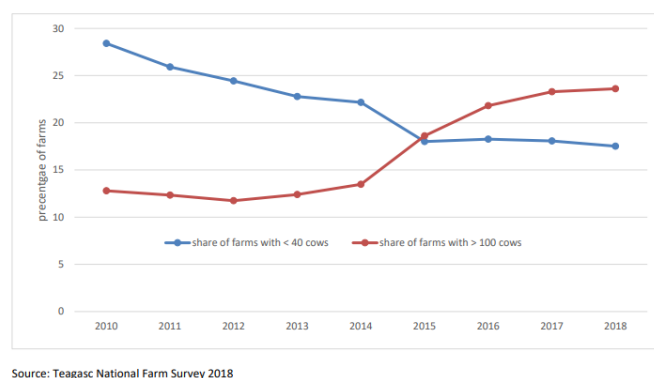


Figure 7- Structural change in Irish Dairy Farm Size 2010-2018

Ireland's second pillar is composed with one national programme. A relatively high proportion of the rural development programme budget is going to the AECM, as well as restrictions on fertiliser use within EFAs. This is also reflected in the national strategy for the Republic of Ireland 'Food Harvest 2020'. Territorial balance is important for Ireland, but the CAP is not seen as the main instrument for achieving it. It has been addressed in a very specific way mainly through strengthening of LEADER. (European Commission, 2016)

Overview of the CAP in Ireland

- Pillar 1:
 - o Basic Payment Scheme 67.8%:
 - o No Small Farmers Scheme, capping of payments above € 150 000;
 - o Voluntary Coupled Support up to 0.25% for protein crops only;
 - o Individual greening payment with 11 types of EFA but no fertiliser on buffer strips. Equivalent measures allowed for crop diversification via AECM, 2% of PG designated as ESPG in Natura 2000 areas;
 - o Partial internal convergence;
- Pillar 2: 40% AECM/conservation of beef genetic material, 35% compensation to areas with natural constraints, 11% investment in agricultural holdings/non-productive AECM investments, 6% LEADER. High co-financing rates for Pillar 2.

d. Agriculture and farm development in Sweden

Sweden is the country with a higher percentage of the organic share area in a total utilised agriculture area (Eurostat). The Swedish farming is characterised by the decrease of farms and at the same times the growing size of the farms, in average Swedish farms have 43 hectares. About half of all farmland is classified as areas with natural constraints (ANC). In the four northernmost counties livestock farms dominate and there are many small farms. In the middle of Sweden there are many large arable farms and fewer small farms. In the south, forestry, cattle and arable farming are important. Profitability of Swedish has varied considerably from one sector to another in recent years, the profitability of milk production has varied substantially.

The difference in agricultural conditions between the North and the South of Sweden is one of the factors that influenced implementation choices. The difference regarding the length of growing season creates issues for the requirements of the cross-compliance and greening for example. This factor also played a role in the decision to do not transfer funds from Pillar 1 to Pillar 2. The internal convergence already redistributed resources from farmers working in the South to farmers working in the North. (European Commission, 2016)

Sweden is allocating 13% of this direct payment envelop for voluntary coupled support to the beef and veal sector. The decision of coupled support for these two sectors is explained by the declining self-sufficiency of this sector and the vital importance of grazing animals for preservation of biodiversity in areas in the North. Swedish farmers are also eligible for the Nordic aid. The European Commission has allowed the Swedish and Finish

government to give national funds for agriculture. This Aid is granted to maintain traditional primary production and processing naturally suited to the climatic conditions of the regions concerned, to improve structures for the production, marketing and processing of agricultural products, to facilitate the disposal of such products, and to ensure that the environment is protected, and the countryside preserved. The EU has fixed a limit of the Nordic aid at 35 million € per year. The aim of this aid is to stop the decline of the dairy sector. In 2015 in Sweden, the number of farms was still reducing but the production was stable. The dairy sector benefit of 267 million SEK (250 000€) per year with the Nordic aid. (European Commission, 2016)

The second pillar of the Swedish CAP is composed with one national programme. The objective of 'sustainable management of natural resources and climate action' is receiving a lot of attention. Plus, this objective is closely connected to the objective of 'viable food production'. The aim behind the implementation choices is to keep biodiversity in certain areas as a result of keeping production in these areas. The largest agri-environmental scheme in Sweden aim to support semi-natural grazing land because of low profitability of grazing animals compared to alternative technologies. Within the objective of 'balanced territorial development', rural employment was an important priority. For instance, that is why Sweden strongly supported the equalisation of the payments in order to contribute to keep employment, in particular in remote areas. (European Commission, 2016)

Overview of the CAP in Sweden

- Pillar 1:
 - Basic Payment Scheme 55% towards a flat rate in 2020;
 - The small farmers' scheme is not implemented, minimal degressivity of 5% above € 150,000;
 - Voluntary Coupled Support at a rate of 13% targeting the beef and veal sector;
 - Individual greening payment and with 6 EFA types, all PG has been designated as ESPG in Natura 2000, forest cover exemption activated;
- Pillar 2: The highest amounts are allocated to M13 Support for areas with natural constraints (22.7%), M10 Agri-environment-climate (22.3%), and M7 Basic services and village renewal in rural areas (13%). Priority 4 receives 63% of the planned expenditure, priority 6 the second largest amount (22%).

3. Impact of PAC on farms and farmers

Studying the CAP impact on farms is an important topic for farmers but also for thus who are making the policies. Analysing the past and the future effects of CAP on farms is meaningful in order to define a CAP who's answering farmers demands and needs besides global challenges. It's for these reasons, several studies analysed how the past policy reforms affected farmers' behaviour and their attentions for the reform who will take place next.

The Eurobarometre conducted in 2000, highlight that 64% of farmers thought that the CAP was unfavourable to them. The Eurobarometre have studied the answer of 3 545 European farmers on the topic of CAP and policy matters. In this study, 64% of farmers thought that the CAP was unfavourable to them. But significant differences between Member States were highlighted. In Denmark and Ireland favourable assessments were recorded. As opposed, Germany and England farmers gave a strongly negative opinion. (Eurobarometre, 2000)

a. Impact of CAP on farmer's income

The European Court of Auditors says in the 2009's report that "European producers have only been competitive on world markets when prices have been high. Outside these periods, they can only export with the assistance of the Community budget." Meaning that most of the EU farmers are competitive only because of subsidies. (European Court of auditor, 2009)

The table 4 shows the proportion of dairy farmer's gross income financed by subsidies paid to them. Between 2000 and 2006, the part of subsidies into the dairy farmer's gross income have risen considerably. In the four countries of this study, the share of subsidies into dairy farmer's gross income was respectively 36% in Germany, 40% in France, 36% in Ireland and 56% in Sweden in 2006. (Curtis, 2011)

Table 4- Subsidies as a share of gross income of dairy farms before taxes and levies (2000, 2004 and 2006) (Curtis 2011)

	2000	2004	2006
Belgium	11 %	19 %	28 %
Czech Republic		44 %	60 %
Denmark	18 %	28 %	31 %
Germany	18 %	31 %	36 %
Greece	14 %		46 %
Spain	5 %	12 %	17 %
Estonia		32 %	43 %
France	22 %	33 %	40 %
Hungary		42 %	41 %
Ireland	15 %	22 %	36 %
Italy	10 %	11 %	16 %
Lithuania		35 %	37 %
Luxembourg	31 %	43 %	46 %
Latvia		58 %	63 %
Netherlands	4 %	12 %	23 %
Austria	32 %	44 %	42 %
Poland		22 %	35 %
Portugal	18 %	27 %	37 %
Finland	72 %	73 %	77 %
Sweden	36 %	41 %	56 %
Slovakia		43 %	65 %
Slovenia		37 %	37 %
United Kingdom	16 %	23 %	34 %

On average across the EU, direct payments (Pillar 1) represent 28% of agricultural income: when payments from the 2nd pillar such as payments for natural constraints or for ecological practices are added, the total represent 33% of agricultural income. However, for individual countries the percentages can be higher, and for individual enterprises within countries the percentages can be higher still. (Matthews, 2017)

b. Impact of CAP on attention to exit farming

Agricultural public programmes or subsidies were taken into consideration in several papers (Beedell & Rehman, 1999; Glauben, Tietge & Weiis, 2006; Robert & Key; 2008, Gorton, Douarin, Davidova & Latruffe, 2008; Bartolini & Viaggi, 2011, Latruffe, Dupuy & Dejeux, 2013). In the study of Bartolini and Viaggi (2011), a high number of farmers were willing to decrease their farm land owned or land rented in case of a no CAP scenario. (Bartolini & Viaggi, 2011)

The study of Latruffe et al (2013), highlight that French farmers are not willing to change their intentions if the CAP were removed. This finding was not surprising since several studies have found the reluctance of farmers from France, and Europe to change under CAP reform. Another finding of this study is the fact that 21% of respondents would continue farming if the CAP continued, intended to stop farming if the CAP were removed. (Latruffe et al, 2013)

The effect of CAP in different EU countries has been studying by Gorton et al (2008) and the finding showed that the majority of farmers believes that the survival of their farm depends on policy supports. Moreover, fewer than one in five farmers agree with the notion that farming skills will allow them to maintain an adequate level of profit whatever the design of European policies. (Gorton et al, 2008)

c. Impact of CAP on farm size

Finding the effects of the CAP on farm structure is difficult to isolate to the other components impacting farm structure. But some studies suggest that the CAP have slow down the speed of change in farm structure as for example, farm size. Farm size has been increasing in most of the European Country, even in countries where small farms are dominant. (Pe'er, 2017)

Some suggestion about the CAP effect on farm size is also very depending to national context. For example, in France, the regulation for selling and renting land on a local level is limiting the impact of direct payment on farm size. (Piet, 2011). In the study of Bartolini & Viaggi (2011), the finding was that the majority of farmers does not have intention to change the amount of farm area, 25% were willing to increase the land size with the current CAP implantation. In the no CAP scenario, the number of farmers with the intention to increase land size reduced significantly, and a very high number of farms had the intention to reduce land owned and land rented. (Bartolini & Viaggi, 2013)

d. Impact of decoupled and coupled payments on farm

The study of Lefebvre et al (2012), suggests that CAP have contributed to the modernisation and the intensification of livestock farming. With the homogenization, by the rationalisation of farm size and structure and the consequent loss of many traditional features (hedges, trees, field margins and wet areas). The coupled payments to quantity produce have motivated farmers to increase their farm size (in ha), but they also contributed

to the intensification of livestock production. The introduction of decoupled payments in 2003 was expected to reduce the impact of CAP on farmer's decisions. (Lefebvre, Espinosa & Gomez, 2012)

The expected impact of decoupled payment on production choices was not fulfilled as farmers choose the most profitable system, resulting in a higher animal density with system intensification. In Denmark, the loss in direct payment for cattle payment was compensated by the CAP payment for grassland, but this compensation was not enough. Resulting in an increase of large-scale farming, with an impact on environmental emissions. In Ireland, the different CAP reforms (with the introduction of decoupling, the extensification programs and the nitrate directive) had a strong influence in land use and livestock intensity. These reforms lead to a decline in livestock units from 1998 to 2006. (Pe'er et al, 2017)

Other studies suggest that the CAP contributed to the decline of mixed farms. Payment coupled to production had an impact on farm structure, but literature estimating the production effects of coupled payments in the EU is relatively sparse. The European Commission examined the production and price effect for dairy, beef and sugar beet producers in its impact assessment of the CAP post 2020. The funding was that coupled payments increase beef and sugar production by respectively 2.4% and 2.8%. At the same time coupled payments also lowered the beef and sugar prices by 3.2% and 3.9%. However, the funding for to dairy cows was that decoupled payments lowered milk supply by 0.7% and raised milk prices by 1.4% (Matthews, 2017) Decoupled payments has reduced the pressure of coupled payments after the reform of 2003. But decoupled payments (linked with HA) are still pushing farmers to grow more crops and/or subsidized crops, then increasing farm size and reducing crop diversity. (Pe'er et al, 2017)

e. The green direction of the CAP

In the study of Gorton et al (2008), they demonstrate that the majority of farmers agrees with the environmental focus of the CAP. The study of Beedell 1 Rehman (1999) concluded that giving subsidies for good environmental practices will motivate farmers in this way.

Crop diversification is one of the elements of the green payment under pillar 1, but this element, according to the literature, is only affecting 5% of the farm due to the broad exemptions and low requirements compared to actual trends. The expected positive effect of crop diversification is relatively small for dairy specialized farms, due to their need in maize silage. In Germany, the government has been supporting the production of maize for BioGaz production. This policy leads to an increase of 82.8% in areas covered by maize in Lower Saxony between 2005 and 2010. (Pe'er et al, 2017) In the study of Lakner et Holst (2015), they realised a simulation based on the rules of crop diversification. The results suggested that 10.7% of German farms would adjust their production scheme, but 56% of these farms were farm with biogas production which means they would need to reduce their production of maize. (Lakner et Holst, 2015) The crop diversification is expected in this case to compensate the effects of the national policy. (Pe'er et al, 2017)

4. European Dairy Farmers

a. European Dairy Farmers (EDF) and the CAP

EDF since its creation in 1990 is a club of farmers, define as a club of open minded and visionary dairy enthusiasts who are eager to improve their knowledge and skills by exchanging and sharing information. EDF is annually providing to these members farm figures, comparisons and information about dairy farming in Europe. These figures are the base for knowledge creation and a lively exchange throughout the year. It aims to provide insights about farm economic developments and serves as a base for the improvement of strategic farm business decisions.

EDF is every year conducting a Cost of Production comparison (CoP) through the EDF network. In the 2015 reports, they found out that 47% of the EDF farms were profitable without considering decoupled payments. 17% were profitable when the decoupled payments were taken into consideration. But 36% were not profitable at all from an entrepreneur's perspective. They also highlight with the analyse of 56 farms in a nine-year period, that in average farms were not profitable without the decoupled payment. Overall, the average farm has not been profitable from an entrepreneur's perspective (covering full economic costs of dairy production without being reliant on decoupled public farm payments). (EDF reports, 2015)

The figure 8 shows the impact of support payments on entrepreneur's profit (The Entrepreneur's Profit indicates which profit remains after deduction of the full economic costs from the total returns.) One of the observations on this figure is that the organic EDF farm have a lower percentage of profitable farm without all support payments than the average conventional EDF farm. The figure 8 shows the importance of support payments on Entrepreneur's profit within the EDF members and it also confirm the information about the importance of CAP on farm's income.

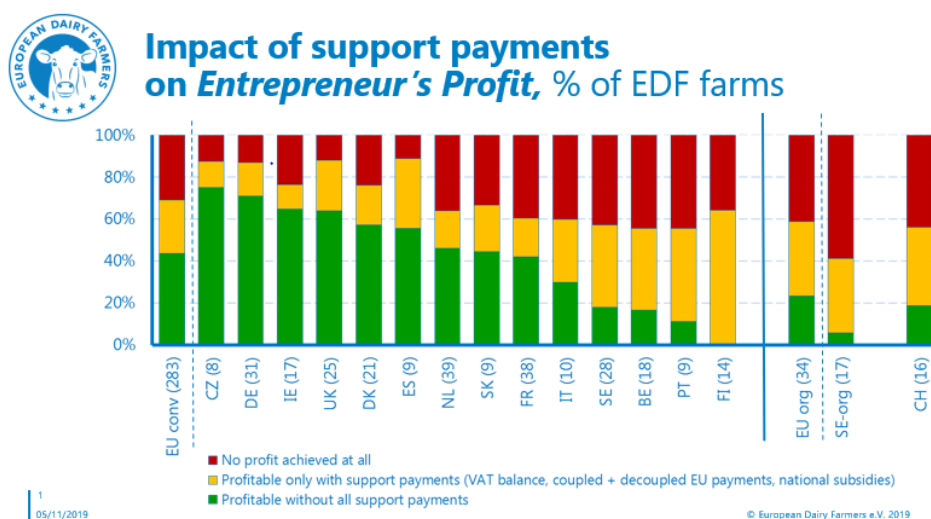


Figure 8- Impact of support payments on Entrepreneur's profit

5. Research question

The Common Agricultural Policy is designed by each Member State in order to meet their needs and wants. The diversity in CAP implementation choices impacted farming and dairy farming differently from a country to another. CAP impact has been analysed in many studies (Beedell and Rehman, 1999, Glauben et al, 2006, Robert and Key, 2008, Gorton et al, 2008, Bartolini and Viaggi, 2011, Latruffe and al, 2013) with different approaches. However, none of the papers, known on this day, has analysed the opinions of farmers in different countries.

Having more insight on the link between CAP and farmers strategies with analysing the opinions of farmers is today relevant. Indeed, analysing the past influence and impact of the CAP on farmers strategies aims to understand better the future impact of the CAP. Recognize this impact on Dairy Farmers is even more important as the new CAP 2021-27 is currently being discussed.

The measures and budget of the Common Agricultural Policy for the period 2021-27 are currently being discussed. The new design of the CAP is today not set up. However, different papers (Dewar, 2017, Schader et al, 2017, Erjavec et al, 2018) aim to describe different approaches of what would be a possible and efficient CAP reform for farmers. This new CAP will influence, at first, farmers and their strategies. Asking them, their expectation is, today, making sense in order to define what would be the CAP design farmers expect for them and their farms.

This study investigates in the context of the 2021-2027 CAP, the link between the Common Agricultural Policy and dairy farmers strategies from different countries. Moreover, this study also aims to understand better the expectations for the new CAP 2021-27. The research question of this study is:

Does the EU-subsidies influence dairy farmers?

To have a better insight in the topic and to understand better the main question, sub questions were defined:

- How has the way of farming changed over the last years?
- What triggered these changes in the dairy farms?
- Is there a difference on CAP opinion according to farm structure?
- What are the expectations of farmers and dairy consultants for the new CAP 2021-2027?

Chapter 2 : Material and methods

In order to answer the main question, research was carried out following the different sub-questions, which has a specific methodology.

The research was conducted through the qualitative method, consisted in interviewing professionals of the different sectors involved. This means the targeted persons were dairy farmers and consultants/advisors of the Dairy sector who could provide information about the Common Agricultural Policy.

The EDF farmer's group was approach through the EDF Network composed with 485 members. To collect data, a survey was used. The survey was provided by paper or online. The survey about the Common Agricultural Policy was added at this end of the EDF Snapshot survey.

The Snapshot Survey focuses on different topics every year: "limits to dairy production" or "work-life-balance" are some of the topics chosen in the past. This year the snapshot survey was about farm succession. The aim is to get personal insight into current topics in order to start discussions between EDF members and partners. The survey about the Common Agricultural Policy was added after the first survey about Farm succession. The CAP survey was introduced with the question "For a special students' project we would like to ask you for your opinion on the Common Agricultural Policy of the EU. We would appreciate you also completing these 5 questions! The project results will also be circulated in the EDF network."

The CAP survey was sent out to all the EDF members via the mailing list and via the newsletter of EDF. After, when the data have been collected from this survey, the answer were regrouped by country and it was then easy to collect the data.

The farmer's group (this group is also a group of farmers, but farmers are not EDF members) received only the survey concerning the CAP. This group was composed of farmers from 4 countries. The survey was distributed through dairy farmers with an online survey made with the platform: umfrage online.

The farmers from the 4 countries were approached with different methods. Most of them were approached via farmer's facebook group. This method allowed more answers and a faster way to collect data, but it also do not allow the verification of the person which is answering. One part of this group was also asked to fill out this survey via national contact in the different countries.

The last group was **the dairy advisor and consultant group**. These persons were contacted via email address found in website of advisory company or governmental institution. Some of them were also contacted via the EDF Network.

The main objective by asking dairy consultant in different countries was to have better insight into the CAP topic but it also aimed to cover the specificity of the different dairy regions within a country. That's why several

specialists were asked in France and in Germany, these countries have several dairy regions with many specificities. It was also one of the challenges with the online survey among farmers as the region were not selected.

It was decided to do not take only EDF members for the 4 selected countries of this study. Indeed, the aim was to have a sample which permits to get a representative conclusion on the opinion of farmers in the 4 countries: Germany, France, Ireland and Sweden. For this study, the targeted sample of farmers in each country was about 30 farmers, with around 10 EDF farmers and 20 non EDF farmers.

After the data collection among farmers and specialists, all the data were regrouped on excel. The analyse of these data have been done with excel. Then, the data were checked in order to verify the accordance between the answer and the question. Finally, after the data analyse the different sub question were answered.

The methods used for each sub-question will be detailed further in this chapter with related sub-question.

1. How has the way of farming changed over the last years?

The significance of this sub-question related the strategy of dairy farmers and more significantly how these one has evolved in the past years. Indeed, looking at this development and the degree of importance of this one is a key issue to answer properly this sub-question.

To provide an answer to this sub-question, qualitative research was used. The survey in appendix 2 was used and distributed among farmers. The questionnaire provided questions on how the ways of farming have evolved in the past years, different topics were mentioned to farmers. This question aims to understand the strategy employed by farmers. The questionnaire is provided in Appendix 2.

Finally, the analyse was made by using the arithmetic average but also the standard deviation of each answer. This analyse aims to get an overview on how the strategy of dairy farmers has evolved in the past years, but also the difference between the different countries.

2. What triggered these changes in the dairy farms?

As follow to the first question which was looking at the development of dairy, this one aims to identify the factors which triggered the changes in dairy farms.

To provide an answer to this sub-question, qualitative research was used. The survey in appendix 2 was used and distributed among farmers. The questionnaire provided question on what promote these changes with several proposition made to farmers.

Finally, the analyse was made by using the arithmetic average but also the standard deviation of each answer. This analyse aims to give an overview on the factors that have impact dairy farmers in the different countries.

3. Is there a difference in CAP opinion according to farm structure?

After having established a primary step of information on farm development. This sub question is about looking at the CAP opinion and its relation with farm structures which means, in this case, the number of cows and the number of hectares.

The questionnaire provided questions about farm localisation, farm structure: number of cows, average milk production per cow, number of HA and number of labour units. First, the farm's structure analysed was done. For that, graphs were created in order to see the main characteristics of the sample.

Then, these graphs were correlated to each other meaning for example that the number of cows was correlated to the importance of the Common Agricultural Policy for farmers, etc. After the analyse of different correlated data, it was possible to have an idea on the difference between CAP opinion according to farm structure.

4. What are the expectations of dairy related people for the new CAP 2021-2027?

The idea of this sub-question was to determine the expectations of dairy farmers for the new CAP 2021-27. The aim of this sub-question was to know and understand better the position and thinking of dairy farmers but also of specialists and consultants.

The data collection was divided in two steps. First step was to conduct interview among specialists and consultants. The idea was to discuss about their CAP opinion and visions but also about their expectations for the new CAP 2021-27. The targeted specialists were thus who were informed in the topic of CAP and involved in the dairy sector.

Then, the next step after the definition of the targeted specialists and the creation of the guideline was to take contact with them. At first, the contact was made by email in order to present them the study and to have a first approach. The expectations of these different interviews were high, they help to collect much information. However, concerned people should agree to talk with the student. This was not the easiest thing. After that, if the answer was positive, an interview was done by phone. The duration was around 45 minutes.

For this topic, the qualitative method presents many advantages to collect data. This method means few specialists were interviewed but the answers provided relevant information: the opinion, the feeling and expectations of the person. To success the interaction, the interviewer should be competent in interviewing. Interview schedule was required to organise the meeting.

After the data collection, the interviews analyse consisted in determining categories and classifying similar responses into these different categories. Then, it was possible to carry out specific idea and position about the CAP but also specific proposals for the new CAP 2021-27.

The second step, to answer this sub question was to ask dairy farmers about their CAP expectations. For that an open question was used in the survey. Farmers were asked to give propositions of what they would like to see implemented in the new CAP 2021-27. Concerning the open question, the answers were classified by similar reasons. Then, it was possible to see the different propositions mention and the difference between farmers in different countries.

At the end of this sub-question, it was possible to know what are the expectations of dairy farmers from different regions and from different sectors.

Chapter 3 : Results

In this chapter, the results obtained during the research phase are presented per sub-question, according to the methodology which was used and presented above in the Materials and Methods chapter.

Results from the survey, which was submitted to farmers from the 1th of November 2019 to 15rd of December 2019, are presented. In total, 98 answers were gathered from 4 countries and from different regions within a country. In total, 28 answers were gathered in Ireland, 35 in France, 20 in Germany and 15 in Sweden. All farmers filled the survey as they could, but some of them did not answer all questions. Finally, interviews with 7 dairy specialists from different companies or institutions are transposed for the last sub-question.

1. How has the way of farming changed over the last years?

To answer this sub-question a survey was conducted among dairy farmers of the 4 countries. The survey aimed to have direct knowledge of the profiles of these farms but also in the ways they have develop their farm. In total, 98 answers were gathered. The questionnaire is provided in Appendix 2.

Answers to the question: How as your ways of farming changed over the last 10 years?

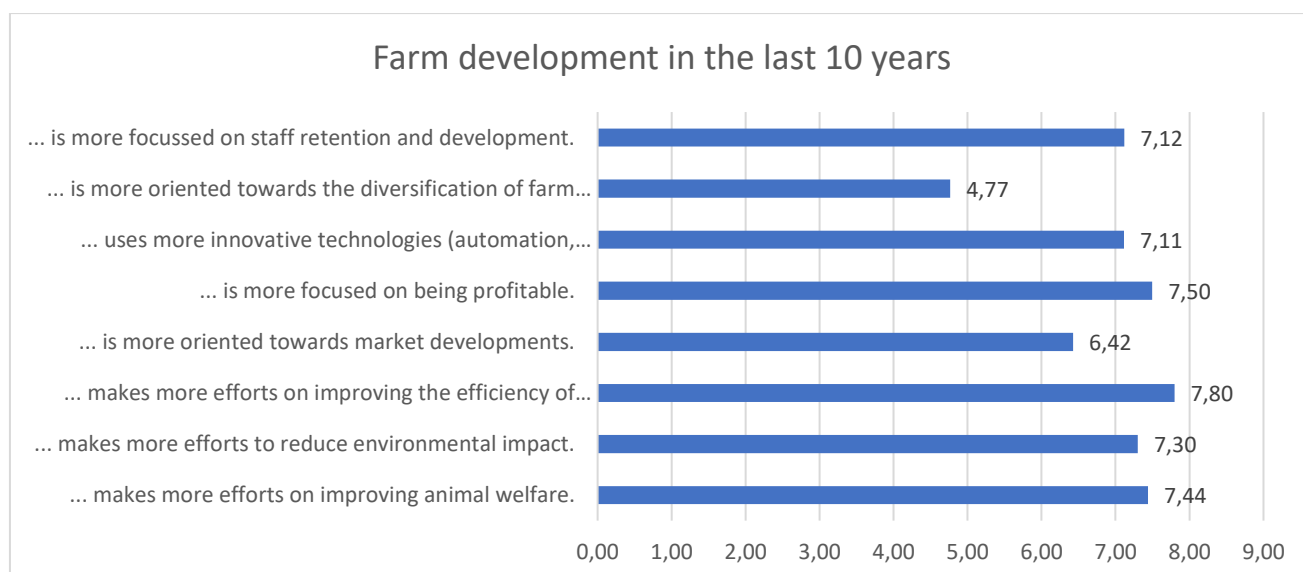


Figure 9- Average score gives on each statement about farm development

For this question, farmers had to mark the statement from 1 up to 10. The figure 9 shows that improving the efficiency of resource use is an important point (7.80/10) instead of the diversification of farm activities get the lowest score (4.77/10). All the other statements get a quite high score above 6.5.

Farmers also had the possibility to add some options to this question. The option “Other” gathered answers about making more efforts on public opinion, improving the work life balance, management of risks and on sustainability.

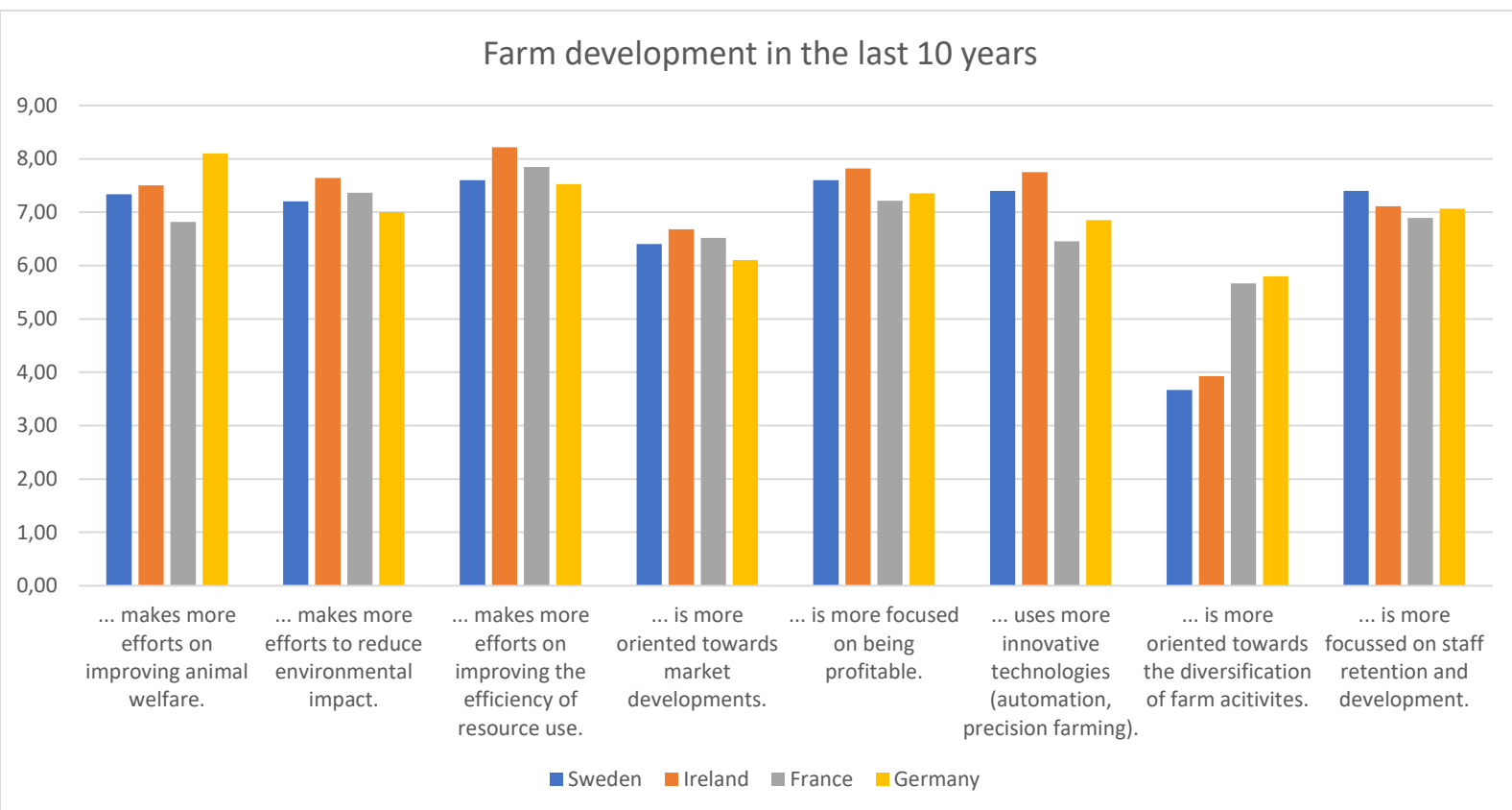


Figure10- Average score give on each statement about farm development, focus on the 4 countries

The figure 10 shows the difference between farm development in the different countries. In general, Ireland has the tendency to give a higher score than the other countries. All the countries have scored the statement “is more oriented towards the diversification of farm activities” with a lower score in comparison to the other statements, especially Sweden and Ireland.

The statement “makes more effort on improving the efficiency of resource use” instead of farm diversification had in almost all the countries a high score. Germans farmers rate the statement “makes more effort on improving the efficiency of resource use” with a score of 7.53. Irish and Swedish farmers give a mark of 8.21 and 7.60. France give 7.92 out of 10 to this statement. This statement has the highest score in the three countries (Ireland, Sweden and France).

German farmers give a score of 8.10 out of 10 to the statement “makes more efforts on improving animal welfare”. It is the statement with the highest score for Germany. All the other countries give a score higher than 7, except France which give a score of 6.82 out of 10.

Moreover, the standard deviations present in the table 5 were all around 2 points but with some slight change between the countries. In fact, the point “is more oriented towards the diversification of farm activities” get the highest standard deviation in three countries, Germany, France and Ireland.

The point “makes more efforts to reduce environmental impact” has the lowest standard deviation in average. But there is some slight change between the countries. Sweden have a really low standard deviation for this point compared to Germany and Ireland.

Table 5- Standard deviation of each statement in the 4 countries

Standard Deviation	... makes more efforts on improving animal welfare.	... makes more efforts to reduce environmental impact.	... makes more efforts on improving the efficiency of resource use.	... is more oriented towards market developments.	... is more focused on being profitable.	... uses more innovative technologies (automation, precision farming).	... is more oriented towards the diversification of farm activities.	... is more focussed on staff retention and development.
Sweden	2,55	1,86	2,53	2,90	2,80	2,23	2,13	3,00
Ireland	2,40	2,33	2,13	2,07	2,33	2,05	2,61	2,47
France	2,66	2,00	1,87	2,00	2,23	2,48	2,79	2,62
Germany	2,53	2,40	2,04	2,02	1,95	2,18	2,59	2,05
Average	2,54	2,15	2,14	2,25	2,33	2,23	2,53	2,54

2. What triggered these changes in the dairy farms?

The answer to the question “What triggered/promoted this change in the way of farming on your farm?”

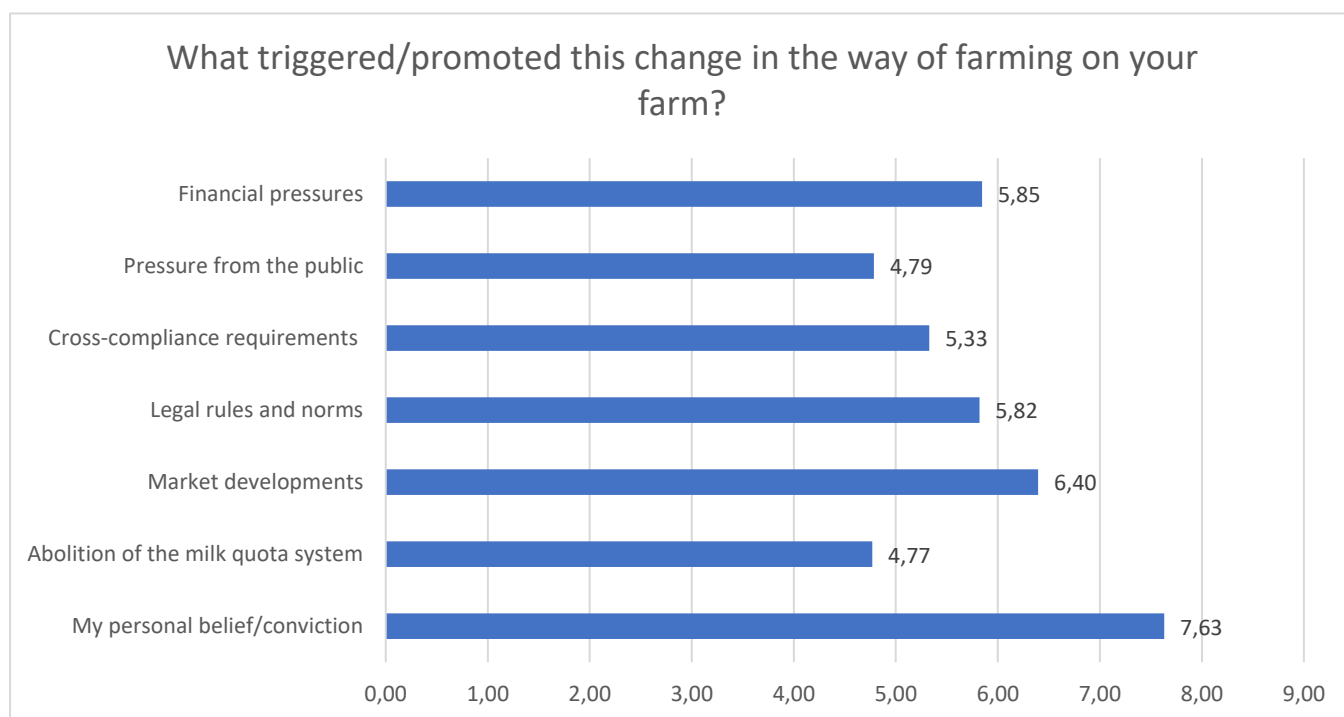


Figure 11- Average score give to factors that may have influenced farm development

For this question, farmers had to score the different statements from 1 up to 10. It was also possible for them to write another influence with the answer “Other”. This option was used by only one farmer which mention “Education” as an influence for change.

In the figure 11, the aim was to define the influence that makes dairy farmers changed. According to the results, the personal belief and conviction is the leading influence in dairy farms. It’s also the point with the lowest standard deviation at 2.25. In average, the point abolition of milk quota had a low influence on the development of dairy farmers, except for Ireland.

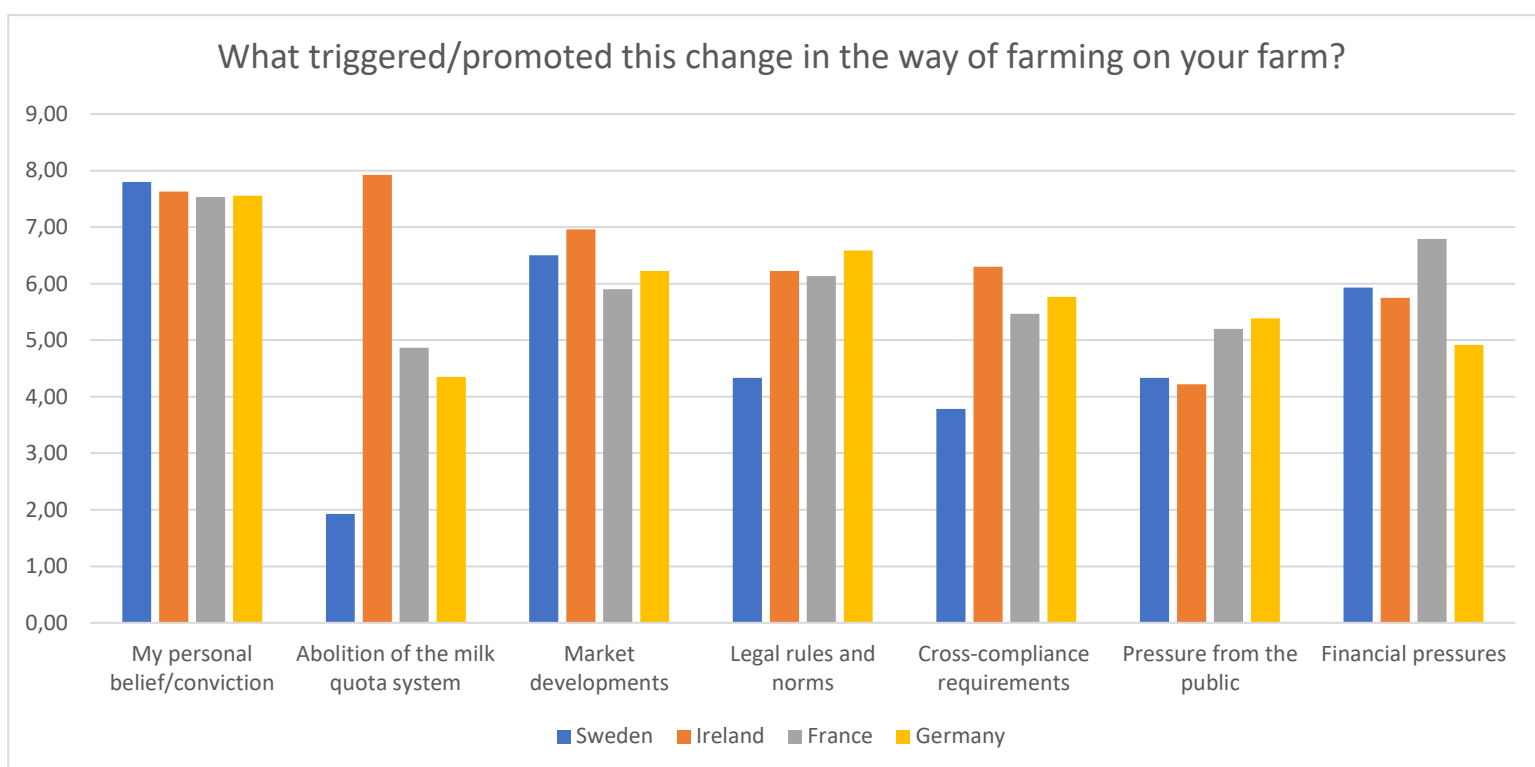


Figure 12- Average score give to factors that may have influenced farms development, focus on the 4 countries

The figure 12 shows that the abolition of milk quota is rated quite low by all the countries, except Ireland which give a score of 7.93 out of 10. Abolition of milk quota is given as the greatest influence for changes in Ireland over the last years.

The cross-compliance requirements seem not to have a big impact on farm development, it’s especially true for Sweden which give the lowest score to this point. However, the standard deviation of the cross-compliance is quite high, it’s about 2.65. This observation is also applicable for legal rules and norms.

The different topics have a more or less impact on dairy farmers. As an example, the figure shows that the financial pressures had a strong impact on dairy farm in France. Instead of Germany, who score this topic quite low at 4.92 out of 10.

3. Is there a difference in CAP opinion according to farm structure?

To answer this sub-question a survey was conducted among dairy farmers of the 4 countries. The survey aimed to have direct knowledge on CAP importance in dairy farms. In total, 89 answers were gathered for this sub question. The questionnaire is provided in Appendix 2.

a. Farm structure

Table 6 shows that the sample of farmers tend to have bigger farms than the average farms in their country. Moreover, the standard deviation shows that the farms seems to be really spread over the average. As an example, in Sweden the bigger farm owned 1 330 cows and the smaller farm owned 70 cows. In Germany, the same observation is made, the bigger farm owned 1000 cows and the smaller 20 cows.

Table 6- Farm's characteristic of the sample

Country	Average number of cows average, national (FADN, 2016)	Average number of cows (Sample)	Standard deviation	Average number of hectares, national (FADN, 2016)	Average number of hectares (Sample)	Standard deviation
Germany	66	212	257	57	207	253
France	59	130	94	75	229	222
Ireland	73	186	118	62	94	43
Sweden	84	458	541	112	769	917

b. Importance of CAP payments

Answer to the question: “How important are the support measures/payments from EU and national authorities for you today? »

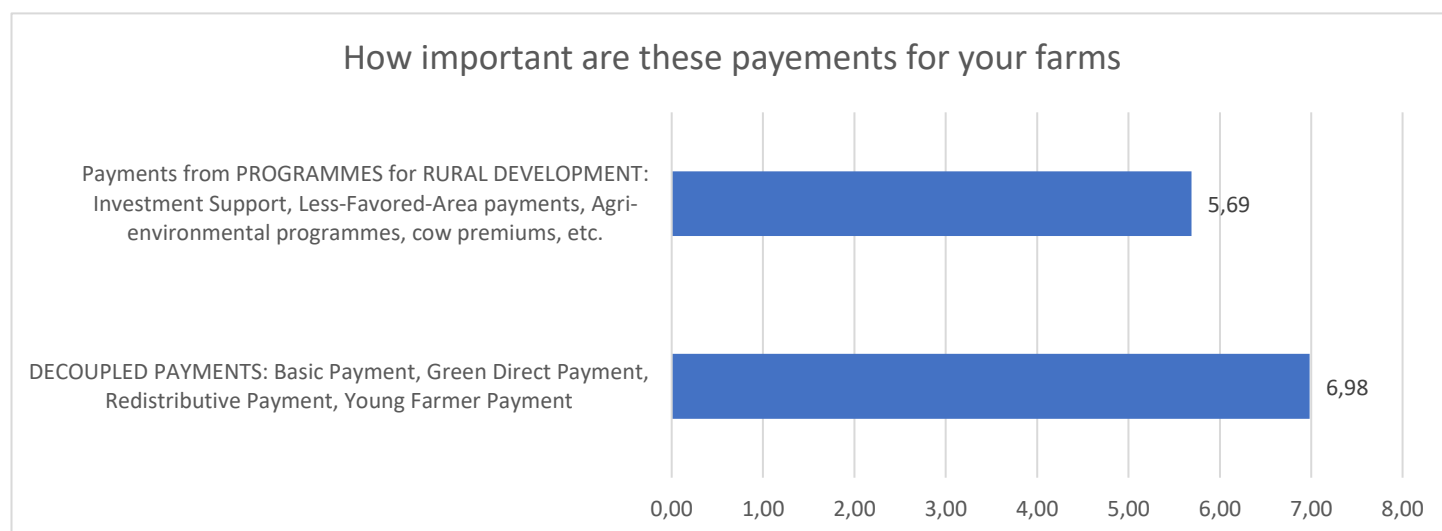


Figure 13- Importance of CAP payments on dairy farms

This figure 13 shows that dairy farmers are giving more importance to the direct payment. Programmes for rural development get a lower score. The figure 14 shows that the CAP importance between the countries is disparate. Swedish farmers seem to accord more importance to CAP subsidies, compared to the other countries. Swedish farmers are also paying more importance to CAP payments under the 2nd pillar than the other countries. Farmers are according less importance to the payment under the 2nd pillar, but the standard deviation on the 2nd pillar is also higher, about 3.08. The importance of the 2nd pillar seems to be relative within farms.

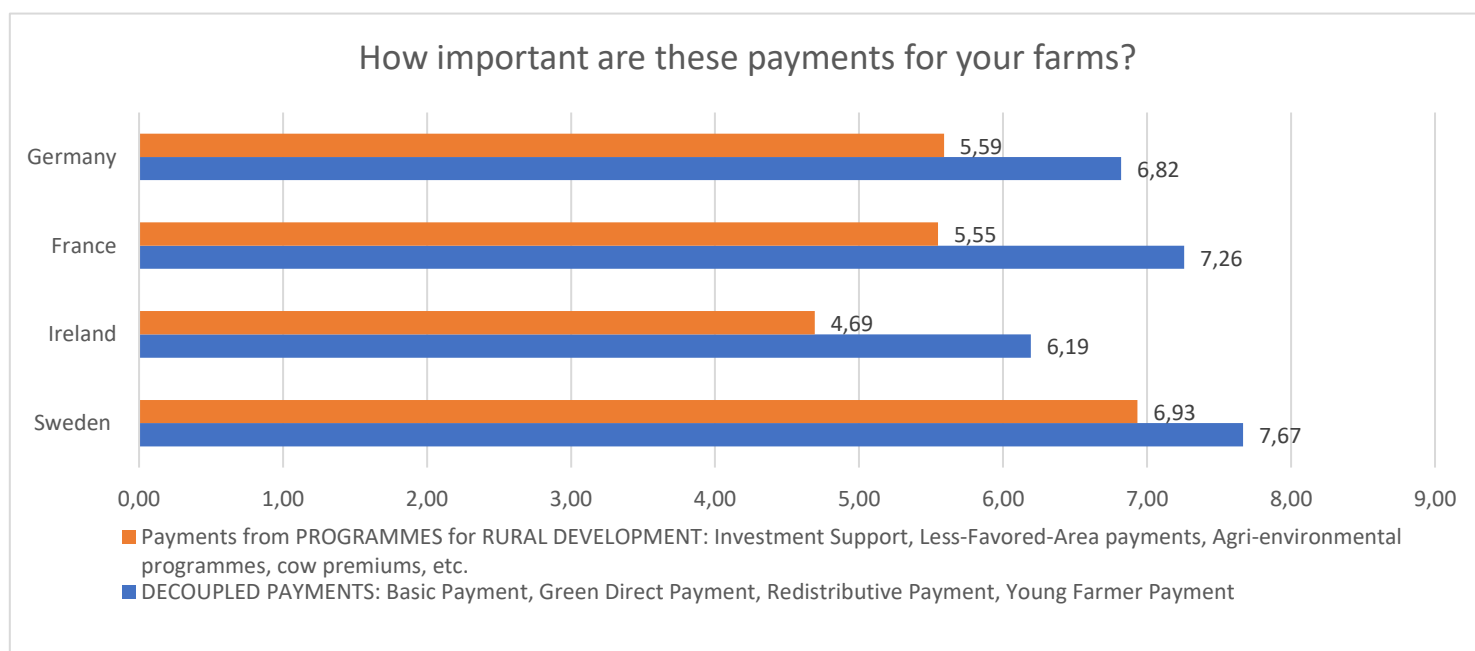


Figure 14- Importance of CAP payments for dairy farms, focus on the 4 countries

c. Participation of farmers under a 2nd pillar programme

To the question, “Has your farm participated in a special support programme for farms under the 2nd pillar (rural development) of the EU Common Agricultural Policy?”

83 farmers have answered this question. 63 didn’t take part to a special support of the EU, it represents 76% of the total respondent. 20 farmers say yes, it represents then 14%.

6 out of the 20 respondents, received subsidies under the 2nd pillar for investment. 4 farmers received subsidies for areas of natural or other specific constraints. 13 received subsidies under programmes for environment under the Agri-environment measures or the GLAS programs. (Green low-carbon agri environment scheme).

Farmers who have been participated in programmes under 2nd pillar gives on average a score of 6.76 out of 10 on the option “Payments for programmes for Rural development.” This average is higher than the total average gives for the 2nd pillar programme which was 5.69 out of 10. Moreover, French farmers who have participated into a 2nd pillar programme give in average a score of 6.58 out of 10. Instead, the average score of all French farmers is 5.55 out of 10. The same conclusion is made for Ireland and Germany, farmers who participated into a second pillar programme give in average a higher score.

d. CAP importance compared to the number of cows

The second part of this sub question was to look at the CAP opinion according to the farm structure which means the number of ha and the number of cows. For that, the information provided by farmers about their farm were used. The results are present below.

Table 7- Comparison between number of cows and CAP importance for dairy farms

Number of cows	N=	Average marks for decoupled payment	Standard deviation	Average marks for rural development payments	Standard deviation
500+	5	8	2.12	5.60	3.29
499-400	6	6	3.46	4.83	3.43
399-300	7	6.57	2.30	3.85	2.41
299-200	12	6.16	3.21	5.08	3.53
199-100	36	6.89	2.29	5.47	3
99-1	23	7.52	2.59	6.57	3.34

First, the comparison between CAP opinion and the number of cows was made in the table 7. The farms who are the most represented are the farms between 199 to 1 cows. The average score of the direct payment are higher for the farm with more than 500 cows but, it’s also important for the smaller farms between 99-1 cows.

These farms also give a higher score to the importance of the 2nd pillar, especially the farms between 99-0 cows. All the class seem to have a high standard deviation, it's especially true for the 2nd pillar.

e. CAP importance compared to the number of hectares

The importance of CAP according to the number of HA was also taken in consideration in this sub question. The table 8 shows that the farm between 199-1 HA are the most represented farms. Farms with more than 500 HA consider the CAP payments (1st and 2nd pillar) important for their farms. The standard deviation link to the decoupled payment is also quite low for the farm with more than 500 cows. However, the smaller farms between 99-1 HA also consider the CAP payment important for their farms.

Table 8- Comparison between number of hectares and CAP importance for dairy farms

Number of hectares	N=	Average marks for decoupled payments	Standard deviation	Average marks for rural development payments	Standard deviation
500+	8	8	1.89	6	3.36
499-400	2	10	0	4	1.41
399-300	7	7	2.45	5.43	2.44
299-200	11	6.64	2.91	5.72	3.26
199-100	35	6.54	2.43	5.34	3.29
99-1	23	7.09	2.83	5.70	3.35

4. What are the expectations of dairy related people for the new CAP 2021-2027?

a. Farmer's opinion

To the question: The measures and budget of the Common Agricultural Policy for the period 2021-27 are currently being discussed. In your opinion, which 3 measures should be included and implemented in the CAP 2021-27?

133 measures were proposed by 55 farmers. Farmers had the possibilities to give 3 measures that they would like to see implemented in the new CAP. 12 answers were gathered for Sweden, 40 in Ireland, 54 in France and 27 in Germany.

46 measures were linked to environment, it represents 35% of the answers. 10 measures were related to animal welfare, 8 to the payments of active farmers, 35 were linked to economics aspects such as milk prices. 8 measures were about young farmers and 5 about the communication of farmers among the society.

In total, 35% of the answers were related to environment. In the 4 countries, the percentage of measures linked to environment was high in all the country. In Sweden, 50% of the answers were associated to the

Table 9- Dairy specialist answers about the Common agricultural Policy

Country	Challenges of the country/region	Does the CAP answer these challenges?	2 nd pillar is answering the challenges	Focus of the CAP for 2021-2027	Impact of the budget's decrease
France (Pays de la Loire) Agriculture house	Farm succession Multiple environmental challenges Prices/ farmer's incomes	Not really	Yes, but there is a too long delay in payments	Fairness Gestion of risks: climate, crisis... Income support	Yes, it will have a strong impact
France (Pays de la Loire) DDTM	Prices Farmer's incomes Shortness the markets	Yes mainly	Yes, but there is too long delay in payments	Simplification Livestock's support	Yes, strong impact
Ireland Agriculture House	Labour availability Land availability	Yes, mostly the CAP is answering the challenges	Yes	Income support Flexibility for instrument CAP need to be adjustable to a 7 years period	Depends where is the decrease Income support: Not real impact Market support: Yes, impact on milk price
Sweden LRF Dairy Sweden	Farm income and profitability Farm succession	Yes and no it's helps but the challenges are still here	Yes, there is good support	Livestock's support Encouraging good practice by supporting them Simplification	Yes, a strong impact More demands but less money
Germany (Schleswig-Holstein) Farmer and regional Advisor	Land prices Environmental challenges	Not really, policy and regulations bring more challenges	Don't know	Simplification	Not really
Germany (Bavaria) Regional advisor	Milk prices Nitrate regulations	No, because the actual challenges are not directly link to the CAP	Yes, very well situated and good implemented	Climate change Income support Fairness	Not really for dairy farmers, it's more impacting crop farmers
Germany Thünen-Institute of Farm Economics	Milk price Farm succession Restricted possibilities for growth	Partly, the CAP has not so much impact on answering the requirements	Yes, but the financial volume is small and there is too much instruments	More innovation Focus on animal welfare Investment support for well-defined aspects (e.g., slurry management, animal welfare)	No

Chapter4 : Discussions

The main objective of this research was about understanding the impact of the Common agricultural policy on dairy farmers. Moreover, the idea of having insight on the expectation of farmers for the new CAP 2021-2027 is interesting as the new CAP is being discussed.

As the study was done in 4 countries, the number of answers needed was important in order to have a good picture of each country. That's why, it would have been more interesting to get some more answers in each country, especially in Sweden. The number of answers in Sweden was quite low and it has been difficult to collect answers in this country. This observation is applicable at all the sub-questions.

1. How has the way of farming changed over the last years?

The aim of this sub question was to understand the development of dairy farms over the last years.

The data collection for this sub question was done with a survey among dairy farmers. First, it was spread over the EDF farmers and then via different methods among dairy farmers. The collected information's were satisfying as it was a qualitative research targeting more the quality of the answer than the quantity of answers. The collected information allowed to respond the sub question.

It was found, that the development of farms seems to be different in the 4 countries. First, Germany shows a stronger development in improving animal welfare than others, especially France. The available literature report that Germany is often going beyond the EU directives for animal welfare regulations, legal standards in Germany are among the highest in the world. Under the CAP, Germany is also spending almost 100 million euros on animal welfare policy in the reporting period 2014-2020. It's the sixth largest amount according to animal welfare among the other member states. (Vogeler, 2019)

Another finding was, that Irish farmers seem to make more effort on reducing environmental impact than the other countries. In comparison, Sweden which is the second country in the EU with the highest share of ecological land, only give a score of 7.2 out of 10 to this point. Sweden is a large producer of organic product, but farmers do not feel a high development of their farms on environmental issues.

The point "makes more effort on improving efficiency of resources use" is one of the points who get the highest score in 3 of the 4 countries. Farmers seem to pay attention to this point and most of them have agreed with that. In fact, 25% give a score of 10 to this point and 15% give a score of 5 or lower. This point is the one with the lowest percentage of farmers which have given a score below 5.

The other statements have a percentage of score below 5 corresponding at 23% for animal welfare and 25% for reduced environmental impact. But this point also gets a really high percentage of score which were 10. 36% of the farmers give a score of 10 at the point "improving animal welfare". And 26% give a score of 10, to the point "reducing environmental impact".

Instead, on the point “diversification of farm activities” only 9% of farmers give a score of 10. Moreover, this point gets a low score average of 4.90 and more than 69% of farmers gives a score below 5 to this point. Results showed that farmers are not willing to on-farm diversification.

This result contrast the actual literature available, but also the focus of the CAP. Farm diversification is essential in the CAP and its 2020 strategies, due to the benefit for territorial and social cohesion of rural areas. In the study of Bartolini et al, the results showed a positive effect of CAP on farm diversification intensity by both pillars 1 and 2. (Bartolini et al, 2018)

The result of farm diversification cannot be really proof, it’s just giving an idea on how farmers developed their farms in the past. The link between farm diversification and the CAP cannot be clearly shown to be relevant. In order, to get a clearer answer a question such as “Do you think the CAP is motivating/encouraging you to farm diversification” should have been used.

2. What triggered/promoted this on dairy farms?

In the first sub question, the farm development was explored. The aim of this sub question is to understand what promoted the development of dairy farms over the last years.

The data collection for this sub question was done with a survey among dairy farmers. First it was spread over the EDF farmers and then via different methods among dairy farmers. The collected information’s were satisfying as it was a qualitative research targeting more the quality of the answer then the quantity of answers. The collected information allowed to respond the sub question.

First, the results showed that farmers are mainly push by their own convictions to run their farms. All the countries, except Ireland, have an average score for the point “My personal conviction/belief” which is the highest score. This finding is positively correlated to the available literature, in the report of Rose (2018), the personal beliefs and opinion of a farmer, influenced by individual circumstances and characteristics, were found as a key determinant of behaviour. (Rose, 2018)

Moreover, this report highlights the study of Mills et al. (2017), an UK case report which investigate farmers’ willingness and ability to undertake environmental management. They say that farmers’ personal beliefs were the key factor in explaining levels of environmental management. In fact, farmers with stronger environmental values performed more measures (Rose, 2018)

Except the personal belief and convictions of farmers, some other influences seem to be important to farmers. It especially true in Ireland, with the abolition of milk quota, which had a strong influence on Irish dairy farmers. They scored this point at 7.95 out of 10. 37% of the Irish farmers gives a score of 10 to this point. 11% of farmers gives a score of 5 or lower than 5, this represents 3 Irish farmers, within these 3 farmers 2 farmers give a score of 1.

This finding supports the actual literature about milk quota abolition. It was a great opportunity for the Irish Dairy sector as shown in the first part. Since the abolition of the quota Irish farmers used the right to produce and the market demand that exists to increase their milk production by almost 50% since 2009.

One interesting finding in this study was on the point “Pressure from the public”, this point was scored at the lowest one. Meaning farmers do not feel really effected by the societal pressure. This result is quite surprising as during the survey distribution many demonstrations, especially in The Netherlands, Germany and France were conducted. The aims of these demonstrations as shows in the figure 16 and 17 were to demands more respect and consideration from the government but also from the society.



Figure 16 & 17- Farmers demonstration in Germany and the Netherlands

Finally, the cross-compliance effect on farm development seems to be small. In fact, farmers score this point at 4.51 out of 10. The cross compliance according to the different specialist interviews do not have a big impact. In application, the requirements of the cross compliance are lower than the national regulations. That means farmers do not need to do something more than the national regulations to fulfil the cross-compliance requirements.

3. Is there a difference on CAP opinion according to farm structure?

The aim of this sub question was to compare the CAP opinion according to farm structure. Farm structure was understood in this question as number of HA and the number of cows.

The data collection for this sub question was done with a survey among dairy farmers. First, it was spread over the EDF farmers and then via different methods among dairy farmers. The collected information's were satisfying as it was a qualitative research targeting more the quality of the answer then the quantity of answers. The collected information allowed to respond the sub question.

a. Farm structure

In the table 7 the average size farm seems to be bigger than the national average farm. First, this can be explained as the farm's sample is quite heterogeneous in the 4 countries. In a second time this sample is also for a half composed with EDF farms. As shown in the table 10, farmers within EDF aims to have bigger farms then farmers which were not EDF members.

Table 10- Comparison between EDF farms and non EDF farms

Country	Average cow non EDF farms	Average cow EDF farms	Average hectare non EDF farms	Average hectare EDF farms
Germany	26	262	32	267
France	72	172	138	205
Ireland	151	275	85	118
Sweden	-	458	-	769

b. CAP importance compared to the number of cows

To answer this sub-question, it was decided to do it in two steps. First farms were classified by their number of cows. After that data on farm structure and CAP opinion were crossed. This method was interesting in order to see if there is a difference in CAP opinion according to farm structure. However, this method creates smaller sample, as an example, the class 500+ cows was composed with 5 farms.

The results proposed that bigger farms with more than 500 cows seems to accord a higher importance to CAP payments but as says previously this class is only composed with 5 farms. The class 199-100 and 99-1 cows are the most represent farms with 59 farms. That's why the table 11 was made with a focus on these two class. The farms between 99-50 cows seems to give a stronger importance on the direct payment but also on the 2nd pillar payments. The standard deviation is still quite high meaning dairy farmers have disparate opinion on CAP payments.

Table 11- Comparison between number of cows and CAP importance for dairy farms

Number of cows FOCUS	N=	Average marks for decoupled payment	Standard deviation	Average marks for rural development payments	Standard deviation
200-150	8	6.88	2.30	6.8	2.71
149-100	28	6.37	2.67	5.4	3.38
99-50	15	8.13	2.61	6.5	2.95
49-1	8	6.75	3.20	5.5	4.17

c. CAP importance according to the number of hectares

The second part of this sub-question was to compare the number of hectares to the CAP opinion. For this part, the observation that some class has a small sample is applicable.

The results suggest that bigger farms accorded more importance to the decoupled payments under the CAP. The farmers with more than 500 hectares give the highest score at this point. Moreover, the standard deviation is really low, meaning that dairy farmers give for most of them a score close to the average.

The class 199-100 and 99-1 hectares are the represent by 59 farms. That's why the table 12 was made with these two class. The smaller farms, under 100 hectares seems to accord a stronger importance to the direct payment. But they also have a strong standard deviation. 32% of the farmers which have between 99-1 hectares give a score of 10 to the importance of direct payment for their farms.

The score allows to the 2nd pillar payment is lower than the one give to the direct payment. It seems to be quite logical as only 12% of the farms takes part in a programme of the 2nd pillar programmes. Moreover, the standard deviation for the second pillar are quite high, meaning that dairy farmers do not have the same opinion about the 2nd pillar importance.

Table 12- Comparison between number of hectares and CAP importance

Number of HA FOCUS	N=	Average marks for decoupled payment	Standard deviation	Average marks for rural development payments	Standard deviation
200-150	11	5.90	2.51	4.73	2.87
149-100	25	6.80	2.4	5.44	3.55
99-50	16	7	2.63	6.38	2.99
49-1	7	7.29	3.45	4.38	3.85

d. CAP importance according to number of cows and hectares

The tables above give an overview on farm structures compared to CAP opinion, to further go with the analyse the table 13 was made. This one compared the different type of farms by regrouping the farms with their number of hectares and cows. Only 4 groups were made due to the cross between the data. As an example, the group with 99-1 cows and 299-200 hectares is only represented by 1 farm. This group is then not relevant and there is no interest to study it.

Then, the group with an acceptable number of farms were analysed. 4 groups were analysed:

- The farms with more than 500 hectares and more than 600 cows
- The farms between 199 and 100 hectares and 199 and 100 cows
- The farms between 99 and 1 hectares and 99 and 1 cows

- The farms between 199 and 100 hectares and 99-1 cows

Table 13- Comparison between CAP importance and farm structure

Farm type	N=	Average marks for decoupled payment	Standard deviation	Average marks for rural development payments	Standard deviation
500+ ha AND 600+ cows	5	8	2.12	5.6	3.28
199-100 cows AND ha	22	6.95	2.05	5.59	3.02
0-99 cows AND ha	16	7.31	2.72	6.2	3.47
0-99 cows AND 199-100 ha	6	7.4	2.42	6.8	3.43

The table 14 shows that bigger farms with more than 500 hectares and 600 cows have score the importance of decoupled payment and 2nd pillar payment with the highest score. This finding was already observed with the tables presenting the importance of payment compare to number of hectares and cows separately. The smaller farm with less than 99 cows also seems to allow a bigger importance to the CAP payments.

4. What are the expectations of farmers and dairy consultants for the new CAP 2021-2027?

The aim of this sub question was to understand better what are the expectations of dairy farmers for the new CAP 2021-2027.

The data collection for this sub question was done in two steps. First, a survey among dairy farmers was made. Then, specialists from the 4 countries were asked and interviews were conducted with them. The collected information's were satisfying as it was a qualitative research targeting more the quality of the answer then the quantity of answers. The collected information allowed to respond the sub question.

The diversity of farming within a country was a challenge in this study which have been hard to handle. To answer this challenge, interviews were conduct among specialists from different regions within a country. For Germany, 3 specialists from different regions were interviewed. For Sweden and Ireland, 1 specialist for each country was interviewed. And in France, 2 specialists were interviewed.

Finding consultants in the different countries have been quite challenging. Due essentially to two main reasons: the person requested did not answer the mail or phone call made. The other reason was that the persons who answers the mail, do not feel knowledgeable enough to answer the survey. At this end, 7 interviews were conducted.

After that, the interviews were analysed. It was difficult to write in a logical and comprehensive way about the results of these interviews. Moreover, there are many ways of representing the results. The selected method was a table, who provides a clear overview and a summary of the answer provides by the person interviews.

The choice of the coding method was used for the answer of dairy farmers on the questions: “The measures and budget of the Common Agricultural Policy for the period 2021-27 are currently being discussed. In your opinion, which 3 measures should be included and implemented in the CAP 2021-27?”

The choice to use an open question to answer this sub question was made in order to see what farmers will reply without any guidance on the answers. This method allowed a variety of answers which was not that easy to analyse. That’s why answers were classified by similar reasons such as environment, animal welfare, fairness, ...

a. Farmers and the environment

Environment is the topic where farmers made most of the proposals, in total 35% of the answers. Sweden was the country where the percentage of answers concerning environment was the higher with more than 32%. But the small amount of answers for Sweden need to be taken into consideration as only 11 proposals were gathered from Swedish farmers.

Under environment, lots of topics and measures were defined such as the use of less fossil energy, working on Co2 efficiency. Some farmers also mention the fact to keep cows grazing by using eco-schemes that protect grassland and keep cows grazing.

Farmers expectations are in line with the current proposition of the European commission which plan a strong focus on environmental and climate action. (Meredith and Hart, 2019) The figure 18 shows the future green architecture of the CAP. The proposal for the eco-scheme under Pillar 1 constitutes the main new feature of the green architecture. Farmer’s answers seem to be in line with the current objectives set as the European level. In fact, farmer’s in their answers seems to be willing to changes but they need to be supported in these changes.

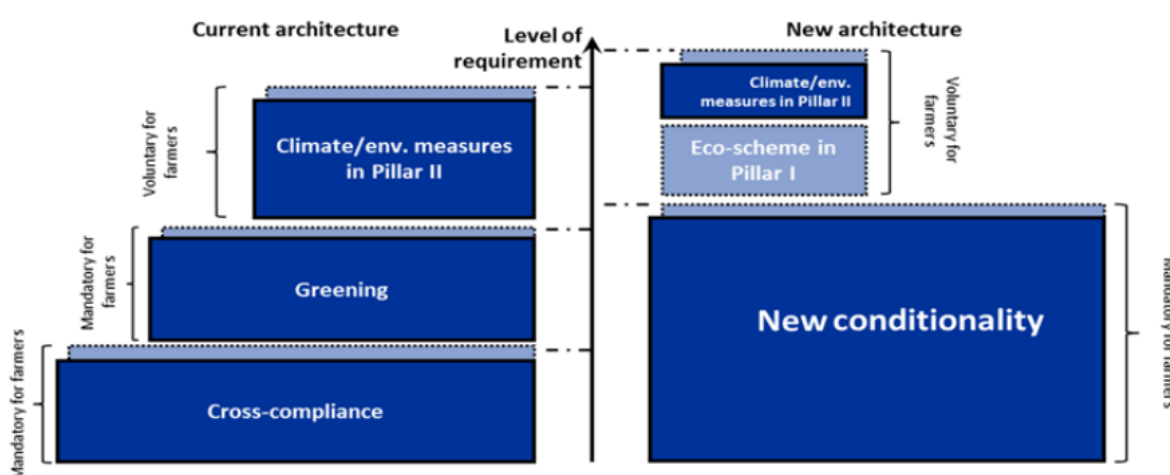


Figure 1: Comparison of the CAP's current and proposed new green architecture

Figure 18- Comparison of the CAP's current and proposed green architecture (Meredith and Hart, 2019)

b. Animal welfare is really important to German farmers

Animal welfare was also really important to farmers. The first sub-question argued the fact German farmers had a strong development on the topic of animal welfare in their farm. In the proposals made by farmers, 26% of the German answers were link to animal welfare. German farmers seem to be really influenced on their farms by the topic of animal welfare. The other countries also mention the topic of animal welfare but as a lower percentage.

This finding is correlated with the one made by European Dairy Farmers in the 2018 Snapshot survey, where farmers gave a score of 5.3 on a 6 scale. One of the conclusions of this survey was that farmers think animal welfare is important for them as it is for society actually. (EDF Snapshot survey, 2018.) This result can be explained as 46% of the total proposals were made by EDF farmers. In total, 8% of the answers were related to animal welfare. The other important topic for farmers was the environment.

c. Young farmers

Farm succession and especially the topic of young farmers have been really important to farmers, 10% of the measures were linked to the topic of farm succession. Some farmers want the CAP to be more in favour of young farmers. Moreover, within the 7 specialists interviewed for this sub-question all were agreed with the fact that young farmers payment is necessary but not sufficient actually. In fact, in some country like Sweden some area are not enough attractive for young farmers and the farms are also getting old.

The new CAP is also expected to answer this challenge as attracting young people and helping them establish a viable business is one of the priorities of the CAP post-2020. In fact, young farmers in the new CAP will benefit from a number of measures, such as the maximum amount of aid for the installation of young farmers will be increased to €100,000. Each country will have to present a specific strategy for attracting and supporting young farmers and some other measures. (European commission, 2018)

d. Economic topics

The last point that farmers have mentioned often is the fact that they want prices unless subsidies. Farmers want better remuneration in order to be less depends of subsidies. This observation can be correlated to the one made in the introduction, as farm incomes are today depending on CAP subsidies. Moreover, France is the country where the answers linked to economics issues have the highest percentage.

The measures under the economics' topic are: farmers don't want a budget reduction, CAP should payed more attention to livestock productions. Some farmers also want more fairness on the CAP payments. The last point often answered under this topic was that farmers want prices for their products.

e. Budget reduction

Finally, the last point to be highlight is the budget reduction of the CAP. Some of the farmers have consider this point in their answer. In regard, to the specialists almost all think CAP reduction will have an impact on dairy

farmers. One of the reactions was that CAP reduction will decrease the effectiveness of the CAP instruments. Instead, all the German specialists says that CAP reduction will have not a real impact on dairy farmers.

Farmers were not directly asked on this topic. A question such as “Do you think the budget decrease under the CAP will influence you and your farm?” could have been helpful to have an answer on this topic. But assuming CAP payment is a greatest part of farm profits, CAP decreased will probably have an impact on dairy farmers. Moreover, in the introduction some studies showed that the want to exit farming was greatly correlated to the diminution or the abolition of the CAP.

At the end, the measures and topics farmers and specialists mentioned were mostly correlated. The last point which has been accurate for almost all the specialist was the fact CAP need to be simpler especially in these ways of application. Only, the specialist of Ireland does not mention this point. Instead, the specialist mentioned the lack of flexibility of the instruments.

Finally, this last sub-question shows a great correlation between farmers and specialist’s expectations and announcement for the CAP 2021-2027. CAP’s objectives seem to be in line with the expectation of dairy farmers.

Chapter 5: Conclusion and recommendations

In the EU, the common agricultural policy since its creation is the subject of many reports and studies. The fact is that the CAP from its beginning is a complex policy to define and to apply. The Common Agricultural Policy is designed by each Member State in order to meet their needs and wants. The diversity in CAP implementation choices made it more complex to design and implemented.

Understanding better the impact of CAP on dairy farmers was the aim of this research. The intention was also to understand more farmer's opinion in regard to the CAP. That's why the study has been conducted in 4 countries, in order to understand more farmer's opinion in relation to their national context. To answer the main question, which is "Does the EU-subsidies influence dairy farmers?", sub-questions were created to get insight on the problematic and then answered the main question.

First, the past development of dairy farms was analysed. The main finding is about animal welfare, farms are today paying more attention to it, especially in Germany. Environmental issues are also really important, a large proportion of farmers assume to have improved or work on reducing their environmental impact. The last point shows that farmers from the four country seems to be more focus on improving the efficiency of resource used.

To go further in understanding farm development, farmers were asked about what triggered these changes. In all the countries, the personal conviction of farmers was the main reason of change, except for Ireland. Quota abolition as a big impact on Irish dairy farmers that's why this is the first reason mentioned. After, farmers were not really agreed with the fact cross compliance makes them changes. In fact, most of the national laws and regulations are going further then the CAP requirements under cross compliance.

After that, the link between farm structure and CAP importance was observed. The fact farmers are giving more importance to the decoupled payment than the payment under the 2nd pillar was one of the main finding. Moreover, only a small number of farmers have participated in a programme under the 2nd pillar. Next to that, the link between farm structure and CAP opinion have been hard to define as no significant results came up. The main observation was that bigger farms (more than 500 cows) and smaller farms (less than 50 cows) seems to give more importance to CAP payments than the farm with an average size.

The last sub-question was about the expectations of farmers for the new CAP. First, farmers seem to be willing to improve their practice and to change. A large number of farmers give answers under the topic of environment and animal welfare. This funding shows the wish of farmers to improve farming practices, but the fact is changing practices or investing is costing to farms that's why CAP is needed on these topics.

At this end, the main question has been answered but CAP's impact on dairy farm structures stay a complex topic. CAP is today influencing farmers in many ways. CAP is influencing farmer's income, subsidies remain necessary for most of the farmers. In a second time, the influence of CAP is hard to precisely describe but many topics are influenced by the CAP through the requirements but also the subsidies they give under the different pillars.

Following this research, the recommendations are:

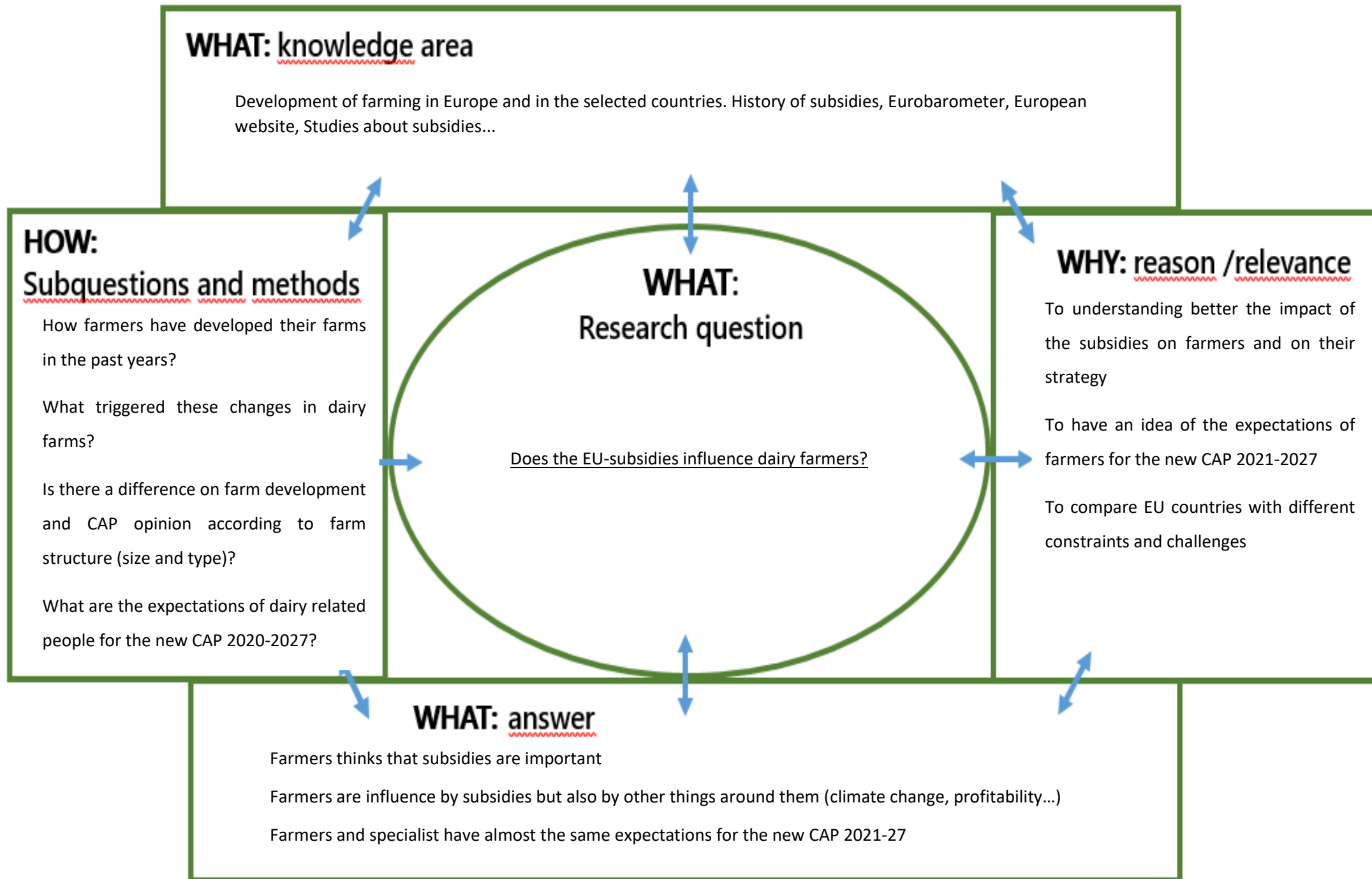
- Farmers are facing more and more challenges and CAP needed to be adjustable to these challenges. The fact is that the instruments used under the CAP need to be accurate during the 7-year period. Moreover, this flexibility will aim to answer better farmer's challenges in each country.
- In contrast, to the first recommendations CAP also need to be simpler for all. Farmers are sometimes lost in the bureaucracy. That's why, today many farmers are asking specialists or consultants to help them with CAP declaration.
- Finally, more studies are needed to understand the CAP due to these specificities but also as the context around is constantly changing. Moreover, a bigger sample will be needed to have results which are applicable to a larger number of farmers. Finally, the focus on a country is also not often enough to understand the CAP payment, especially the 2nd pillar payment. A regional focus could help to have a better answer of the CAP impact on dairy farmers, especially under the 2nd pillar.

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Appendix 1- Research Plan



Appendix 2 – Questionnaire Dairy Farmers

Dairy Farmers and the CAP

Page 1

Dear Mister or Madam,

With this questionnaire, we would like to ask your opinion on the past and future Common Agricultural Policy of the EU.

Please answer the question in such a way that they reflect your personal opinion.

Completing the questionnaire will take about 10 minutes

Thanks a lot for your co-operation!

Page 2

Where are you farm located? *

Please answer with your country and region

What is the number of cows on your farm? *

What is the average production of milk per cow? *

Please answer with the average production per cow, per year

What is the number of HA on your farm? *

What is the number of units labour on your farm? *

Do you have a conventional or an organic farm? *

☐ I have a conventionnal farm

☐ I have an organic farm, since when?

Do you have any other production ? *

☐ No I don't have

☐ Yes I do have, please specify

How has the way of farming changed on your farm over the last 10 years? Compared to 10 years ago, my farm... *

Please rate the different options on a scale of 1 (= I totally disagree) to 10 (= I totally agree).

	1 I totally disagree	2	3	4	5	6	7	8	9	10 I totally agree
... makes more efforts on improving animal welfare.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... makes more efforts to reduce environmental impact/become greener.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... makes more efforts on improving the efficiency of resource use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is more oriented towards market developments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is more focused on high profitability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... uses more innovative technologies (automation, precision farming).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is more oriented towards the diversification of farm acitivites.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is more focussed on staff retention and development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other, please specify <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

↓ +1

What triggered/promoted this change in the way of farming on your farm? *

Please rate the different reasons for changing the way of farming according to their importance for your farm on a scale of 1 (= no reason for change at all) to 10 (= very important reason for change).

	1 No reason for change at all	2	3	4	5	6	7	8	9	10 Very important reason for change
My personal belief/conviction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Abolition of milk quota	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Market developments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legal rules and norms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cross-compliance requirements due to subsidies and grants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pressure from the public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial pressure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other reasons, please specify: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

↓ +1

How important are the support measures from EU and national authorities for your farm today? *

Please rate the importance for YOUR FARM on a scale of 1 (= not important at all) to 10 (very important).

	1 Not important at all	2	3	4	5	6	7	8	9	10 Very important
DECOUPLED PAYMENTS: Basic Payment, Green Direct Payment, Redistributive Payment, Young Farmer Payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PAYMENTS due to SPECIFIC PROGRAMMES for RURAL DEVELOPMENT: Investment Support, Less-Favored-Area Payments, Payments from Agri-Environmental Programmes, Cow Premiums, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Have you participated in a special support programme for farmers under the 2nd pillar of the EU Common Agricultural Policy? *

Please tick one option and specify your answer.

☐ No, I haven't.

☐ Yes, I have joined these programmes:

☐

The measures and budget of the Common Agricultural Policy for the period 2021-27 are currently being discussed. In your opinion, which 3 measures should be included and implemented in the CAP 2021-27?

Please enter your 3 proposals in the boxes.

Proposal 1

Proposal 2

Proposal 3

Appendix 3- Interview guideline Dairy Specialist

Guideline: Farmers and the CAP

1. Presentation

Name:

Country/Region:

Company:

Position:

2. Opinion of the CAP in your country

In your region or country, what are the challenges that farmers are facing?

(Adapting to changing consumer and societal demands, fair living for farmers, climate change, natural constraints, lack of growth and jobs in rural areas, competitiveness of your country ...)

Do you think the implantation of the Rural Development programme (2nd pillar) in your country or region is fitting to the challenges and constraints farmers have?

Only for Sweden, do you think that the Nordic aids add a positives impact on farming in your country?

(On the diminution of farms, productivity of farms, farm income...)

For you, in your country, what was the impact of the CAP on farm development?

(Greening, sustainability, efficiency, competitiveness, innovation, profitability, market development...)

What triggered/promoted this change in the way of farming on your country?

(Abolition of milk quota, market developments, legal rules and norms, cross-compliance requirements due to subsidies and grants, pressure from the public...)

Opinion about the young farmer payment of the CAP?

- Do you think this subsidy have encourage young farmers to take over a farm?

Opinion about the “Green Payment” from the CAP?

How important are the support measures from EU and national authorities on farms today?

- DECOUPLED PAYMENTS: Basic Payment, Green Direct Payment, Redistributive Payment, Young Farmer Payment
- PAYMENTS due to SPECIFIC PROGRAMMES for RURAL DEVELOPMENT: Investment Support, Less-Favored-Area Payments, Payments from AgriEnvironmental Programmes, Cow Premiums, etc.

The measures and budget of the Common Agricultural Policy for the period 2021-27 are currently being discussed: Which 3 measures should be included and implemented in the CAP 2021-27?

Decrease of funding for the new CAP, how to modernise the CAP, It is possible to make it simpler for farmers?