Dairy 4 future

Work Package 4
Dairy sector analysis

Analysis of the dairy sector in Brittany: skills and dynamism

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CHAMBRE D'AGRICULTURE BRETAGNE

PART 1

A KEY AGRICULTURAL ACTIVITY IN BRITTANY

Brittany is France's first region for milk production, with more than four out of ten farms producing milk. Around 11 300 dairy farms produced 5,6 million tonnes of milk in 2017, more than 22% of national production. Over 99% of the milk produced is processed by the dairy industry. About 16 thousand tonnes are self-consumed or processed and sold on farm. Organic milk accounts for 2% of the regional milk deliveries.

The dairy sector takes an important part in the regional agricultural economy. In 2017, dairy accounted for 21% of the gross Agricultural Product (excluding subsidies and services). On a ten year average, it is the leading breton agricultural sector.

Although milk is produced throughout the region, some areas are more intensive with volume exceeding 6 000 litres/ha, such as northern and eastern Finistère, Fougères, Vitré, center Brittany. Over the years, production tends to increase in the already more productive areas.

Dairy production is expanding

Due to the French rules set to manage milk quotas, regional production remained stable for decades, at around 4,8 million tonnes (Figure 1). More recently, thanks to successive reforms of the EU's Common Agriculture Policy, breton milk output increased. In 2017, the production reached 5,6 million tonnes which is 15% higher than in 2007. In a 2010 regional plan devised by the local dairy interbranch organisation, a 18% rise in regional dairy production was forecasted between 2012 and 2020. Actual figures show a less dynamic development than expected: between 2012 and 2017, growth equals to 6%. Even without quota, production is constrained by the contracts linking producers to their processors, some of which won't allow dairy production to grow.

In the meantime, dairy herd has expanded. In an unstable market, farmers were careful to avoid increasing their costs, therefore the increase in regional production relied on herd growth rather than on an improvement in productivity. Producers detained indeed 775 000 dairy cows in 2017, 4% more than in 2007. Holstein is the dominant breed (82% of the cows), Normande comes second (6%) and Montbeliarde third (3%). On average, a cow produces 7,4 tonnes of milk per year.

A broad range of farm sizes and systems

Over the last decade, the number of smaller farms has been steadily falling, while the share of dairy farms with more than 50 cows has grown sharply. In 2017, a dairy farm milked 57 cows on average: average herd has increased by 20 cows compared to 2007 (Tab.1 and Fig. 2).

TAB. 1: SIZE OF DAIRY FARMS IN BRITTANY (NUMBER OF DAIRY COWS DETAINED)
(Source: EDE Bretagne)

	2007	2017	Évolution
10-19 dairy cows	6%	3%	-67%
20-49 dairy cows	66%	28%	-71%
50-99 dairy cows	26%	55%	+41%
100 cows and more	1%	13%	+577%
Number of dairy farms*	17,161	11,566	-33%
Small farms**	3,107	1,983	-36

*farms detaining more than 10 dairy cows
**farms detaining less than 10 dairy cows

FIG.1: GROWTH OF MILK PRODUCTION IN BRITTANY
(Source: Statistique Agricole Annuelle, Agreste, 2018)

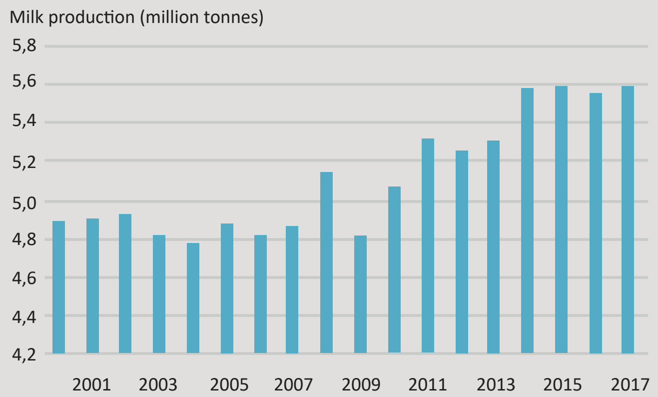
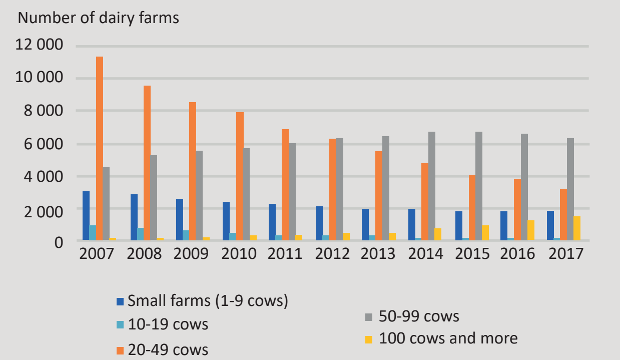


FIG. 2: SIZE OF DAIRY FARMS IN BRITTANY(NUMBER OF DAIRY COWS DETAINED)
(Source: EDE Bretagne)



62% of dairy farms are specialised in milk production. 14% also produce beef, 14% pig and 7% poultry. The rest of the dairy farms produce veals or rear sheep or goats. In Brittany, almost all of the dairy farms also grow grass and forage plants as well as, to a lesser extent, cereals and industrial crops.

With some farms producing less than 200 tonnes of milk annually and some delivering more than 1 thousand tonnes, Brittany obviously presents a broad range of dairy farming systems. One common point lies in the feeding system. Thanks to Brittany temperate weather, producers can rely on fodder produced on farm (maize and grass mainly) and cows graze for at least six months in the year. Producers keep purchased feed at low levels, around 1 100 kg/cow/year, enabling feed costs to remain quite low.

In smaller farms, grass exceeds ¾ of the fodder area, but on average it accounts for around 60% of the fodder area. Maize (around 40% of the fodder area on average) is most of the times a major forage component in the ration for dairy cows. With yield quite stable over the years (dry matter yield of 13 tonnes/ha on average in Brittany over the last decade, varying from 11 tonnes to 15 tonnes), it provides a reliable source of feed, even on years with adverse weather conditions.

Some producers tend to reduce maize share in fodder area and some even choose an almost 100% grass system, most of them relying partly on common agricultural policy (CAP) environmental subsidies for switching their system and maintaining the economical balance of their farm. Conversely, maize share in the fodder area tends to increase when milk production rises.

TAB. 2: DISTRIBUTION OF DAIRY FARMS PER ASSOCIATED PRODUCTION IN 2017

(Source: EDE Bretagne)

	Dairy	Dairy & beef prod.	Dairy & veal prod.	Dairy & pork-prod.	Dairy & poultry prod.	Dairy & sheep or goats (meat and/or milk	Dairy farms*
Share of farms	62%	14%	2%	14%	7%	1%	11,529

*farms detaining at least 5 dairy cows or 10 bovine animals

Dairy farmers' economical results stricken by prices volatility

Milk prices have been unstable over the last ten years, and so have been incomes. The income per family work unit reached a peak of 34 000 € in 2011, while it sank to less than 11 000 € during the 2009 crisis (Tab. 3). The last dairy crisis has hit hard incomes in 2015 and 2016 and the improvement in 2017 revenue (figures not yet available through FADN) is still timid. These are only average results, profitability varies greatly between farms.

Debt ratio has grown over the last few years: dairy farmers have been investing in order to expand dairy production (the table 3 shows indeed an increase in milk output and livestock) and have also incurred debts in order to face falling milk prices. Subsidies (mainly CAP subsidies) contribute to farms economics but tended to decrease following the latest CAP reforms and especially recently with the implementation of the convergence scheme.

TAB. 3: AVERAGE ECONOMIC RESULTS OF SPECIALISED DAIRY FARMS (Source: AGRESTE, FADN, 2018)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Utilised Agricultural Area (UAA, ha)	66	67	69	74	78	79	78	79	81	79
Fodder area (ha)	47	48	49	55	57	56	57	58	59	59
Fodder area on UAA (%)	71%	72%	71%	73%	73%	72%	73%	73%	73%	74%
Maize area (ha)	17	18	18	20	21	21	22	23	23	22
Maize area on fodder area (%)	36%	38%	36%	36%	37%	37%	38%	39%	39%	38%
Total livestock unit (LU)	77	84	88	92	94	97	101	106	110	108
Dairy cows (head)	46	48	50	54	56	58	60	61	64	63
Milk yield (kg/cow)	6,990	6,961	6,758	7,192	7,429	7,267	7,255	7,487	7,497	7,298
Milk production (ton)	322	337	337	385	417	419	434	460	476	457
Average milk price (€/t)	340	361	288	330	361	340	381	381	330	309
Annual work unit (AWU)	1,8	1,8	1,9	1,9	1,9	1,9	1,9	1,9	1,9	1,8
Unpaid annual work unit (UTA)	1,7	1,7	1,7	1,8	1,8	1,8	1,8	1,7	1,7	1,7
Crop and Livestock specific costs (€/ton)	133	159	148	145	154	167	179	173	161	151
Feed (€/ton)	51	63	55	61	63	69	82	77	73	68
Total subsidies - excluding on investments (€)	25,730	26,020	27,110	30,590	30,560	29,310	28,570	26,110	28,190	27,750
Subsidies on UAA (€/ha)	390	389	392	412	392	373	365	331	348	353
Real net agricultural entrepreneurial income, per unpaid annual work unit (€)	29,560	25,150	10,860	27,180	34,310	27,180	30,060	25,680	17,340	15,280
Long-term debt (€)	107,900	114,250	118,500	129,710	135,530	138,670	132,300	140,930	148,440	139,420
short-term debt (€)	35,680	42,430	43,270	43,540	43,380	48,700	50,380	53,500	68,650	73,050
Debt ratio (%)	46%	48%	49%	48%	46%	46%	44%	46%	50%	51%

PART 2

A DENSE INDUSTRIAL SECTOR

Around 90% of milk delivered in Brittany is collected by five companies : Sodiaal Union (over 1 million tonnes), Lactalis (over 1 million tonnes), Laïta (over 1 million tonnes), Agrial and Savencia. In order to reduce logistical costs, most of the major dairy collectors share their milk collection. Hence, a farmer linked to one processor can have his milk transported by another company. Current development of milk segmentation may in the future compromise this collective organisation.

40 dairy processing plants operated by 15 different groups

40 dairy processing plants with at least 20 employees are located in Brittany (Tab. 4). Most of them both collect and process milk, but some focus on processing and buy milk, cream or butter to other processors.

Cooperatives represent 64% of milk deliveries: Sodiaal Union, the leading milk collector in Brittany, owns seven plants (> 20 employees) in the region; Laïta (6); Agrial (2); CLAL Saint Yvi (2). Several private processors are also located in Brittany: Lactalis (7 plants); Savencia (3); Triballat Noyal (3); Sill (3); and also Froneri France (1); Synutra France International (1); Agromousquetaires (1); Andros (1); Marie Morin France (1); AB technologies alimentaires (1) and JP Lallemand (1). Among these processors, Froneri and Synutra are detained by foreign firms, while Agromousquetaires is a subsidiary of the French retail group Intermarché.

Over the last ten years, market concentration increased in the regional dairy industry. Among the major events, Lactalis took over la Blanche Hermine, cooperative stemed from the bankrupted company Nazart (2007). Sill purchased la Laiterie de Saint-Malo in 2008. Even, Terrena and Triskalia, three cooperatives located in Brittany and Pays de la Loire, deepened their partnership and joined their industrial activities in 2009 in Laïta (which was already a marketing union). L'Armoricaine laitière merged with Laïta in 2015. Sodiaal Union, France's leading dairy cooperative company, established itself in Brittany in 2011 (purchase of the debt-ridden private company Entremont-Alliance). Agrial took over the cooperative Coralis (2013) which had previously purchased Laiterie de Derval (2009, Pays de la Loire) and merged with the cooperative Eurial (2016), which already detained a plant in Brittany.

New economic players also established themselves in the region. A chinese company, Synutra, set up a processing plant in 2016 in order to produce infant formula and established a partnership with Sodiaal for its milk supply. Synutra is now planning to build a new plant to produce UHT drinking milk but is currently experiencing severe economic hardship and will most probably give up this project. Rolland, a plant specialized in ice cream production (third

TAB. 4: MILK PROCESSORS IN BRITTANY (PROCESSORS OPERATING AT LEAST ONE INDUSTRIAL SITE IN BRITTANY WITH AT LEAST 20 EMPLOYEES), DAIRY PRODUCTS AND DAIRY INGREDIENTS (Source: Chambres d'agriculture de Bretagne)

Group	Number of industrial sites* in Brittany	Numbers of employees	Scale (plants location)	Activities	Range of dairy products
Lactalis	7	(2 000 - 2 500)	International	Specialised in dairy products	Consumer products and ingredients
Laïta	6	(1 500 - 2 000)	National	Specialised in dairy products	Consumer products and ingredients
Sodiaal Union	7	(1 000 - 1 500)	National	Specialised in dairy products	Consumer products and ingredients
Triballat Noyal	3	(800 - 900)	International	Dairy products and other	Consumer products
Savencia	3	(300 - 400)	International	Specialised in dairy products	Consumer products (specialised in cheese)
Sill	3	(500 - 600)	National	Dairy products and other	Consumer products and ingredients
Froneri France	1	(300 - 400)	International	Specialised in dairy products	Consumer products (ice creams)
Synutra	1	(300 - 400)	International	Specialised in dairy products	Consumer products (infant formula in Brittany)
Agrial (Eurial)	2	(100 - 200)	National	Dairy products and other	Consumer products and ingredients
Agromousquetaires	1	(100 - 200)	National	Dairy products and other	Consumer products (ice creams)
CLAL Saint Yvi	2	(50 - 100)	Regional	Dairy products and other	Consumer products
Andros (Novandie)	1	(20 - 50)	International	Dairy products and other	Consumer products
Marie Morin France	1	(20 - 50)	Regional	Specialised in dairy products	Consumer products
AB technologies alimentaires	1	(20 - 50)	International	Specialised in dairy products	Ingredients (specialised in cheese)
JP Lallemand	1	26,020	Regional	Specialised in dairy products	Consumer products (ice creams)

*With at least 20 employees

largest ice cream manufacturer on the French market and leading manufacturer of retailers' own brands), was purchased by R&R Icecream (2010) and is now operated by Froneri, a joint-venture set up by Nestlé and R&R (2016).

Dynamics of industrial investment was very strong over the last decade, with three major aims :

•Expand processing capacities in order to strengthen their activities and increase the value of dairy products, answer market signals and face the growing milk supply expected following the abolition of milk quotas: investment in dairy ingredient (powders and others) processing capacities, butter and cream, UHT milk...

•Enhance industrial and marketing performance : modernising, improving the supply chain and setting up logistic centers, reducing carbon footprint and developing energetic independence...

•Diversify activities : infant nutrition; health, clinical and medical nutrition; organic products, vegetarian food; food retail...

A broad range of dairy products

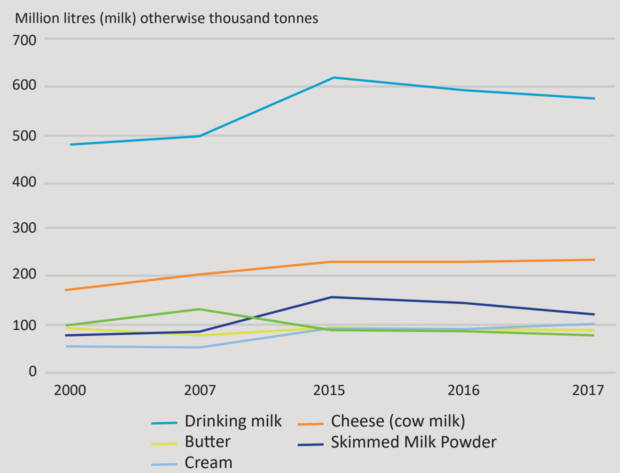
The regional mix-products is dominated by four main dairy products (Fig. 3):

•cheese : 240 thousand tonnes produced in 2017, about 14% of national production. Emmental accounts for 54% of the cheese produced and 51% of national production.

•butter : 90 thousand tonnes produced, 26% of national production.

•skimmed milk powders : 120 thousand tonnes produced, 31% of national production.

FIG. 3: DAIRY PRODUCTS PRODUCED IN BRITTANY (FINISHED DAIRY PRODUCTS)
(Source: AGRESTE DRAAFBretagne, FranceAgriMer, Enquête annuelle laitière et enquête mensuelle laitière)



•drinking milk : 600 thousand tonnes, 17% of national production.

The regional dairy processors also process milk into cream (100 thousand tonnes, 22% of national production), yogurt and other ingredients (whey, caseins...). The regional sector value-added rate reached 11% in 2015 which is lower than the national average (16,7%). This is explained by two main reasons : the main breton dairy products are sold in heavily competitive markets, both national and international, and none benefits from official labels of origin which could increase their value.

Over the last ten years, cream, skimmed milk powder, drinking milk and cheese productions tended to grow, while yoghurt and milk-based desserts production declined. The value-added rate is expected to grow in the years to come, given some recent investments in processing capacities of high value dairy ingredients.

Breton dairy products are sold in diversified markets

Consumer dairy products and dairy ingredients

Most consumer products are sold under the processors' trademarks or under retailers' trademarks. Some benefits from a collective brand (Produit en Bretagne), others from a certification mark (Bleu Blanc Coeur, milk with high omega-3 fatty acids content).

Organic production is steadily developing. With 141 thousand tonnes produced by 531 farms in 2017, Brittany accounts for 22% of the French organic milk which is processed by the industrial sector. The number of organic dairy farms has grown sharply in the last ten years, only 211 operated in 2007.

Food processing industry (bakery and pastry, ready meals...) is also an important output for breton dairy products.

Varied destinations for Breton dairy products

82% of the industry turnover relies on the national market. Regional production far exceeds local consumption (by more than four times theoretically). Exports of dairy products generated 886 million € in 2017, against 499 million € in 2007. These figures do not include infant formula sales, which have strongly increased since Synutra's plant started its activity.

Exports of dairy products tended to rise over the last few years, but with a few setbacks in 2014, 2015 and 2016 linked with Russian embargo and Chinese momentary reduced purchases. Almost 50% of the exports are sent to non-EU countries.

On-farm processing is marginal but is attracting growing interest

On-farm processing is marginal and the amount produced tend to decline : 16.4 thousand tonnes were processed on farm in 2017 against 18.1 thousand tonnes in 2007. There is no official data estimating the numbers of farms involved in on-farm processing, at least 130 farmers are members of the regional association gathering on-farm dairy processors and around 200 may be in activity. The Breton association noticed a growing interest in on-farm processing, both from farmers and customers, so the number of on-farm processors may grow again in the years to come.

PART 3

COMPLEX RELATIONSHIPS WITHIN THE SUPPLY CHAIN

Relationships within the supply chain are regulated by law

In 2011, written contracts became compulsory in the French dairy sector, which means that processors are now compelled by law to propose a contract to farmers. French contracts are rather long-term (five to seven years) and include compulsory clauses such as price determination, volume, length, and contract termination procedures.

Differences exist whether the processor is a cooperative or a private group.

•For a cooperative, the contract consists in the company articles of incorporation, rules and regulations and on the membership documents. Cooperatives are bound to collect and pay for all the milk produced (that most of the times they also process) and they have to sell it at the best price. In order to manage levels of production, some cooperatives started using A and B price mechanism a few years ago. Farmers on these contracts receive an A price for their milk up to a certain volume that equals a major part of their former quota. A price is based on national/European market returns. B price is based on butter and skimmed milk powder values and was designed to enable farmers to increase their milk output, if they wanted to, but at a price less stable than the price obtained on the national market. A C price is also established at a very low level in order to avoid surplus of milk. Cooperatives can also ask farmers to forward plan their levels of monthly production.

•Private companies establish formal written contract. Volumes are often more strictly managed, differentiated prices are less common and companies leave little room for production development.

Farmers and processors strive to regain bargaining power

In Brittany milk is abundant and supply is expected to grow even more in the years to come : processors don't compete for milk supply. Hence, farmers' bargaining power is quite low and relationship with processors is often tense and antagonistic. Lack of bargaining powers seems to be visible in milk prices : processors tend to align their milk price down to their competitors offering lower price rather than to those offering higher ones. Processors themselves struggle to negotiate with the highly concentrated French food retail sector.

In order to regain bargaining power, producers linked with private dairies can join producer organizations (PO). They can benefit from their support, obtain slightly more interesting contract clauses and rely on collective contract frameworks negotiated by the PO. Many PO are active in Brittany, some are non-commercial (APR-Froneri / APLLT-Sill / APLBL-Lactalis also member of the national PO association Unell, OPLGO-Lactalis, OPLB-Lactalis / France MilkBoard Bassin Grand Ouest-several processors / CLE P&S Ouest-Savencia also member of the national association Sunlait /APBO-Bel), one is a commercial PO (Biolait, organic milk) and an association gathers several PO (AOP Grand Ouest).

Another way for producers and processors to regain market power and increase dairy products value is to further develop the differentiation of dairy products. Lately, Bel established a partnership with its producers through their POs to increase dairy products quality and now pays a milk price significantly higher than its competitors'. Sodiaal, Lactalis, Triballat Noyal... also launched their own initiative. A new collective brand "Lait de pâturage" was launched in 2017 by Breton farmers to promote cows grazing. With the hope to seize more value from their milk, some Breton producers decided to set up their own plants and started selling their milk under their own trademark (Laitik) in 2017, but are today facing severe difficulties. Food retail players are also establishing contracts with farmers or processors to differentiate dairy products sold under their own brand. Differentiation is a noticeable trend for the Breton dairy sector and future will tell us if it really have a positive economic impact within the supply chain.

PART 4

SWOT ANALYSIS OF THE REGIONAL DAIRY SECTOR

S — STRENGTHS

- Favourable climate for fodder production
- Strong density of farms, industries, education and research organisations
- Recent investments both on farm and in the industry
- Wide range of processed dairy products
- Presence in Brittany of numerous players of the food processing industry (bakery and pastry, ready meals) using dairy ingredients

W — WEAKNESSES

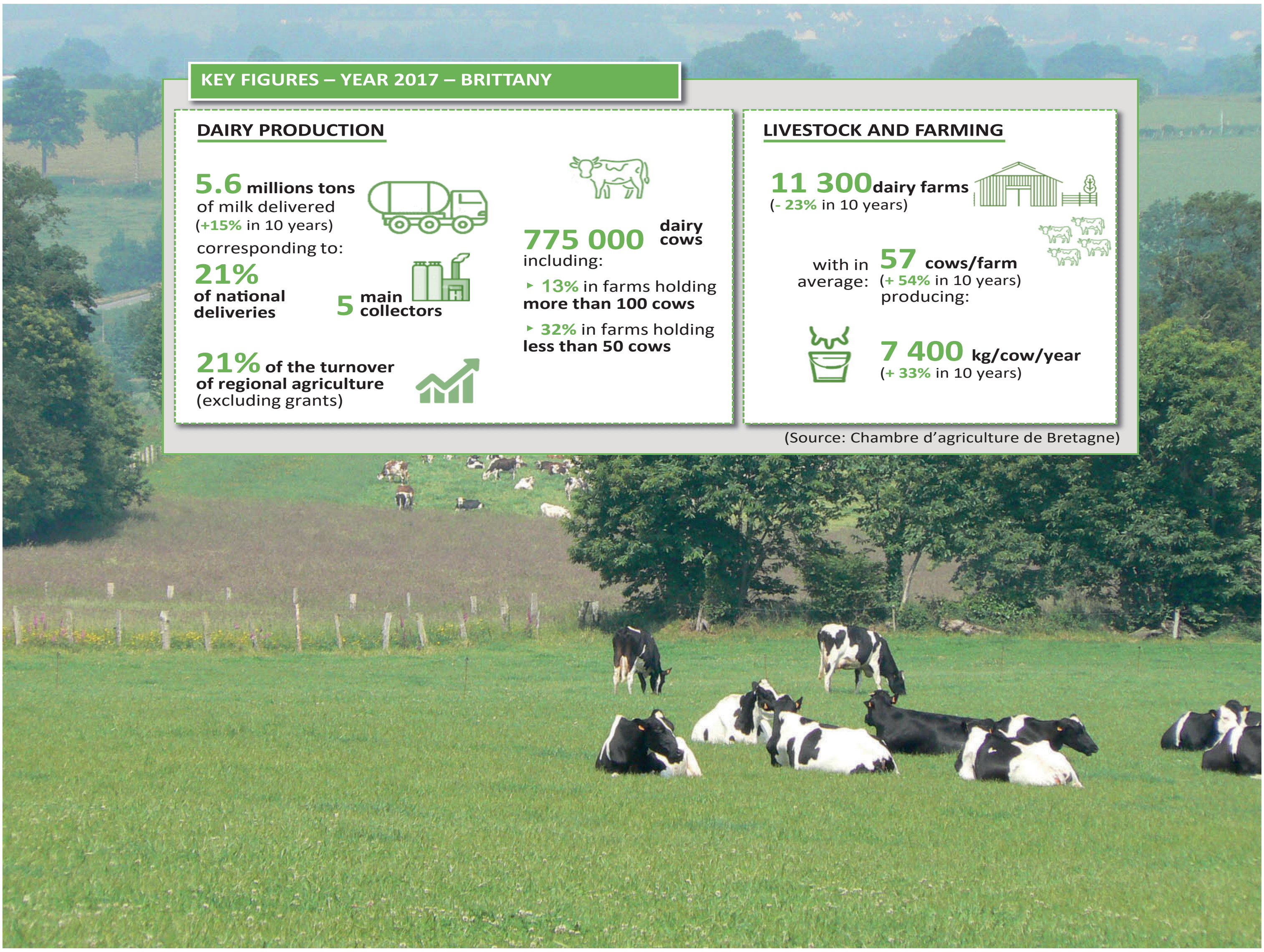
- Low economic efficiency due to high fixed costs, limited degree of farm specialization and land dispersion (fragmented and dispersed plots of land)
- Complex relationships within the supply chain and highly concentrated French food retail sector
- Value of dairy products still below French average
- Breton exports focused on few countries
- High volatility of milk and input prices

O — OPPORTUNITIES

- Growing demand of local products and differentiated dairy products
- Increasing world demand for butter and cheese
- Innovation and export capacity
- Restructuration opportunities due to the decrease in farm numbers

T — THREATS

- Ageing of the farm population and several retirements to face in the years to come
- Difficulties to find on-farm employees and competition with other productions less labour-demanding
- Risk of cessations of activity due to negative cash flow
- Reduction of CAP subsidies
- Growing environmental and climate concerns



KEY FIGURES – YEAR 2017 – BRITTANY

DAIRY PRODUCTION

5.6 millions tons of milk delivered (+15% in 10 years)

corresponding to:

21% of national deliveries

5 main collectors

21% of the turnover of regional agriculture (excluding grants)

775 000 dairy cows

including:

- **13%** in farms holding more than 100 cows
- **32%** in farms holding less than 50 cows

LIVESTOCK AND FARMING

11 300 dairy farms (- 23% in 10 years)

with in average: **57** cows/farm (+ 54% in 10 years)

producing:

7 400 kg/cow/year (+ 33% in 10 years)

(Source: Chambre d'agriculture de Bretagne)

REPORT WRITING
Maud MARGUET
CHAMBRE D'AGRICULTURE DE BRETAGNE
maud.marguet@bretagne.chambagri.fr

aGRICULTURES & TERRITOIRES CHAMBRE D'AGRICULTURE BRETAGNE

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