

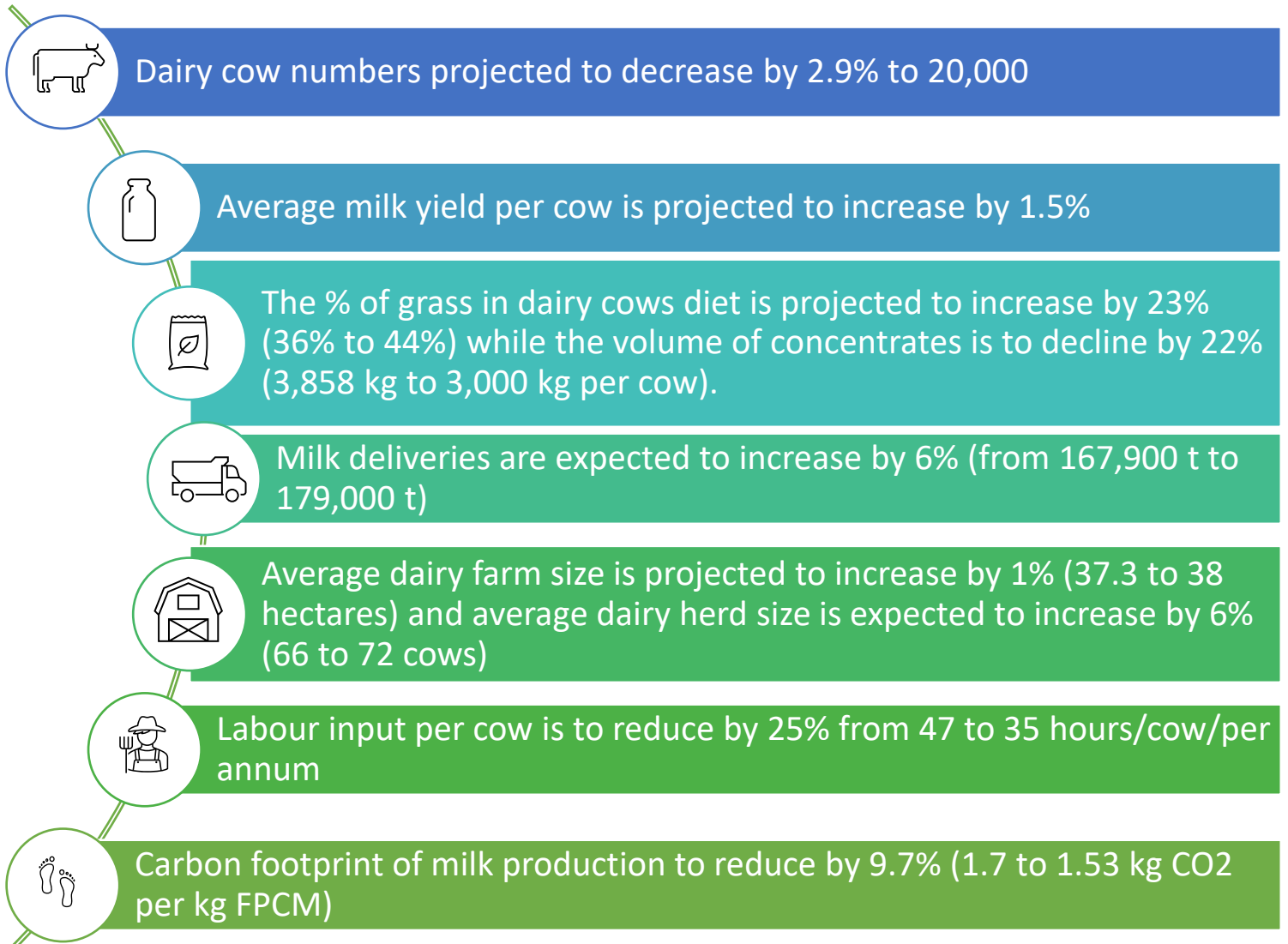
# Analysis of the Basque Country dairy sector to 2030

Increase in production but with less cows and farms



WORK PACKAGE 4  
DAIRY SECTOR ANALYSIS

## Overview of outlook to 2030:



# Analysis of key performance indicators for the Basque Country

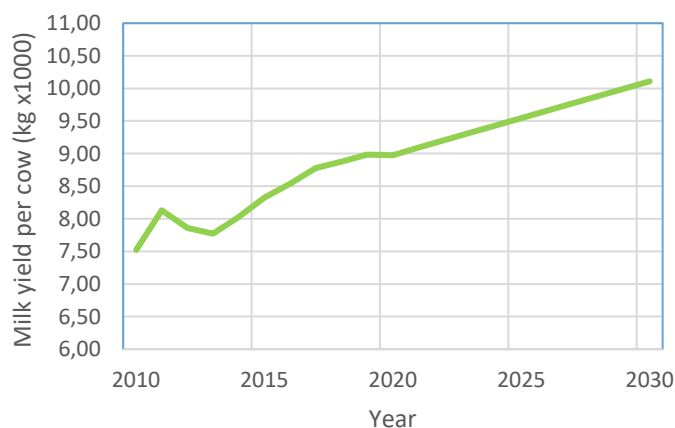
## DAIRY COW NUMBERS

In a business as usual scenario outlook, dairy cow numbers across the Basque Country are expected to decrease year on year to 2030. It is projected that dairy cows numbers could decrease by 2.9% from 20 600 in 2019 to around 20 000 in 2030. This decrease in dairy cow numbers is associated to a decline in the number of dairy farms over the period, especially those farms without generational renewal. However, this decrease is subject to the prevailing market conditions such as feed price and cost production integration within milk price.

## PRODUCTIVITY

Projected growth in milk output in the Basque Country is predicted on the back of increased productivity per cow. Average milk yield per cow is projected to increase by 1.5% over the 2019 to 2030 period (circa 8,294 to 8,700 kg per cow). This is to be achieved on the back of genetic and performance improvement of farms. Feed ratio is projected to reflect and increase on the share of grass in dairy cows diet from 36% (2019) to 44% in (2030). Conversely, the volume of concentrates is to be reduced by 25% over the same period.

Figure 1. Projected Changes in Milk Yield to 2030



	Year		
	2019	2025	2030
<b>Milk production (000 t)</b>	171	173	174
<b>Number of dairy cows (000 heads)</b>	21	20.4	20
<b>Number of dairy farms</b>	311	290	280
<b>Average farm size (ha)</b>	37	39	39
<b>Average herd size</b>	66	70	72
<b>% farms &gt; 100 cows</b>	11	14	16
<b>% farms 50 – 100 cows</b>	17	19	21
<b>% farms &lt; 20 cows</b>	54	50	45
<b>Milk yield (l/ cow/ year)</b>	8 294	8 500	8 700
<b>Milk solids (kg/ cow/ year)</b>	575	575	575
<b>Stocking rate (LU/ ha)</b>	2,98	3,10	3,20
<b>Average chemical nitrogen fertiliser applied (kg N/ ha/ year)</b>	120	90	80
<b>Concentrate (kg/ cow/ year)</b>	3 858	3 500	3 000
<b>Share of grass in dairy cows feed intake (%)</b>	36	40	44
<b>Share of purchased feed in dairy cows feed intake (%)</b>	60	50	45
<b>Labour input (hour/ cow/ year)</b>	47	45	44
<b>Carbon footprint (kg CO2e/ kg FPC milk)</b>	1,7	1,62	1,53

The increased herd size may place additional requirement of labour input, but available technification and improvements in life quality of farmers may help to reduce cow labour input per cow from 47 hours/cow/per year in 2019 to 44 hours/cow/per year in 2030.

## MILK DELIVERIES & PROCESSING CAPACITY

On the back of the increased cows numbers and productivity per cow, milk deliveries across the Basque Country are expected to increase by 7% from 167900 t in 2019 to 179000 t in 2030. It is expected that processing capacity in the region is enough to treat this additional milk.

No major consolidation is expected in the Basque dairy industry at processor level in the medium term.

## DAIRY FARM STRUCTURES

Based on a decrease in the number of small farms, the average dairy farm size is expected to increase by 4.6% from 37.3 hectares in 2019 to 39 hectares in 2030. Limitations of land price make it difficult to increase land area as it would be desirable to improve self-efficiency.

The average dairy herd size in the Basque Country is expected to increase by 9% from 66 cows in 2019 to 72 cows in 2030.

This is expected to precipitate an upward movement in the herd size distribution where 42% of the dairy herds had more less than 9 cows in 2018 to a situation.



### Environmental footprint

Similar to other regions in the Atlantic area, dairy farmers and the industry in the Basque Country are aware that the environmental footprint of the sector is coming under increased scrutiny both from a policy and consumer acceptable perspective. Reductions in chemical fertiliser use are explicitly set down under the European Green Deal, EU Farm to fork, EU biodiversity strategies and, in Spain, the Royal Decree on Sustainable Fertilisation of Agricultural Soils.

In this context, the average chemical nitrogen fertiliser applied (kg/ha) is projected to decrease by 33% from 120 kg/ha in 2019 to 80 kg/ha in 2030. This is to be achieved by a move towards move grass clover and multi-species swards where nitrogen fixation from the atmosphere replaces chemical nitrogen fertiliser. The form of chemical nitrogen applied is also expected to change, with a move away from straight urea and calcium ammonium nitrogen based fertilisers towards protected urea and ammonium fertilisers. This aims to reduce ammonia and GHG emissions from agriculture.

With the adoption of a suite of climate friendly farm level practices on dairy farms across the Basque Country, the aim is to reduce the carbon footprint of milk production by 9.7% from 1.7 per kg CO<sub>2</sub> per kg Fat and protein corrected milk (FPCM) in 2019 to 1.53 in 2030.

In terms of biodiversity, the habitat area on the average dairy farm is projected to increase from 5% in 2019 to 6% in 2030.



### Environmental challenges

Most GHG in the Basque Country originate from transport (33%) and energy (33%) (Greenhouse inventory Report, 2019). Agricultura contributes with 3% of GHG emissions in the region originate (Greenhouse inventory Report, 2019). In the last year, emissions in this sector have increased by 1% due to a slight increase in fuel consumption in the sector. Compared to 2005 and 1990, emissions have decreased by 49% and 47%, respectively. The explanation is related to a decrease in energy consumption (oil derivatives and natural gas) as well as in a reduction in the livestock population and in the doses of mineral fertilisers. Agriculture sector in the Basque Country generates a lower proportion of GHG emissions compared to Spain (12%) and to EU average.

The European Green Deal (Farm to Fork and Biodiversity strategies) has proposed cutting fertiliser use by 20 %, reducing the use of antimicrobials in farmed animals by 50%, reducing pesticide use by 50%, while ensuring that 10% of agricultural area is under high-diversity landscape features and 25% of farmed land is under organic production. These measures will certainly affect the projections

described, adding quite a level of uncertainty to them in the near future. Because of the uncertainty concerning future economic and policy variables such as agricultural prices, rates of subsidy and trade tariffs, it is not possible to project agricultural activities from agriculture with any high degree of certainty.

## CONCLUSION

Milk production is awaited to lightly increase thanks to better yields but in a context of a continuous trend of decrease in cows and farms numbers.

The projections produced heretofore are premised on a business as usual policy environment. There are a number of environment and macro environment factors which could influence the structure of the Basque Country dairy sector to 2030.

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