FORECAST 2030

Analysis of the South-West England dairy sector to 2030

Rise in production expected allowed by an increase of productivity

Dairy 4 future

WORK PACKAGE 4
DAIRY SECTOR ANALYSIS

Overview of outlook to 2030:

- Dairy cow numbers projected to decrease by 3% to 416k head
- Average milk yield per cow is projected to increase by 15% and milk solids by 20%
- Average chemical nitrogen fertiliser applied to decrease by 6% (160 to 150 kg/ha)
- Milk deliveries are expected to increase by 12% (from 3.6 billion to 4.0 billion kg) and may require additional processing capacity
- Average dairy farm size is projected to increase by 46% (147 to 215 hectares)
- Average dairy herd size is expected to increase by 54% (194 to 215 cows)
- Target to have agriculture be net zero by 2040

- **Projections are subject to no trade disruption on foot of Brexit, CAP reform or future free trade agreements.**
- **Projections subject to no major environmental policy changes associated with climate change, water quality or biodiversity.**

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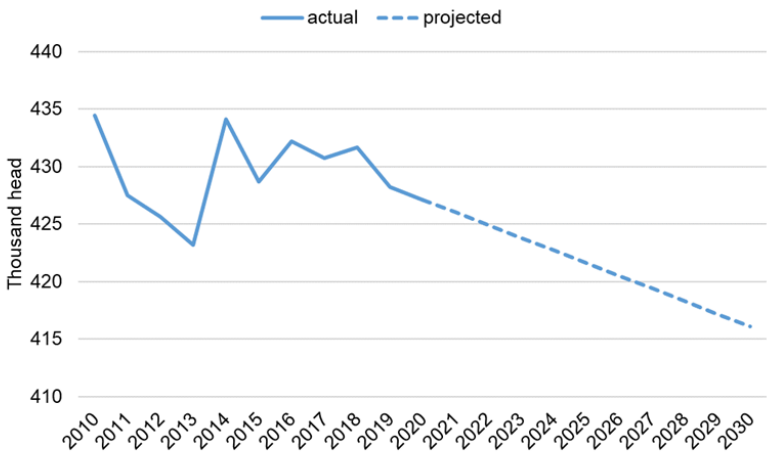
DAIRY COW NUMBERS

Based on the overall trend of the last 4 years (2016-2019), the number of cows is expected to decrease over the next 10 years. This would go from 428k head in 2019 to 416k head in 2030, down 3% overall. The region's cow numbers were turbulent over the last ten years (2011-2020), with the data showing that cow numbers dropped at the start of the decade, jumped between 2013 and 2014, dropped again to 2015, around the time of the last dairy crisis, then somewhat recovered. The herd size has been trending downwards overall since 2016. As the long-term trend for the GB dairy herd as a whole is long-term decline, we would not expect a return to pre-2016 levels.

Figure 1: Number of dairy cattle in south-west England



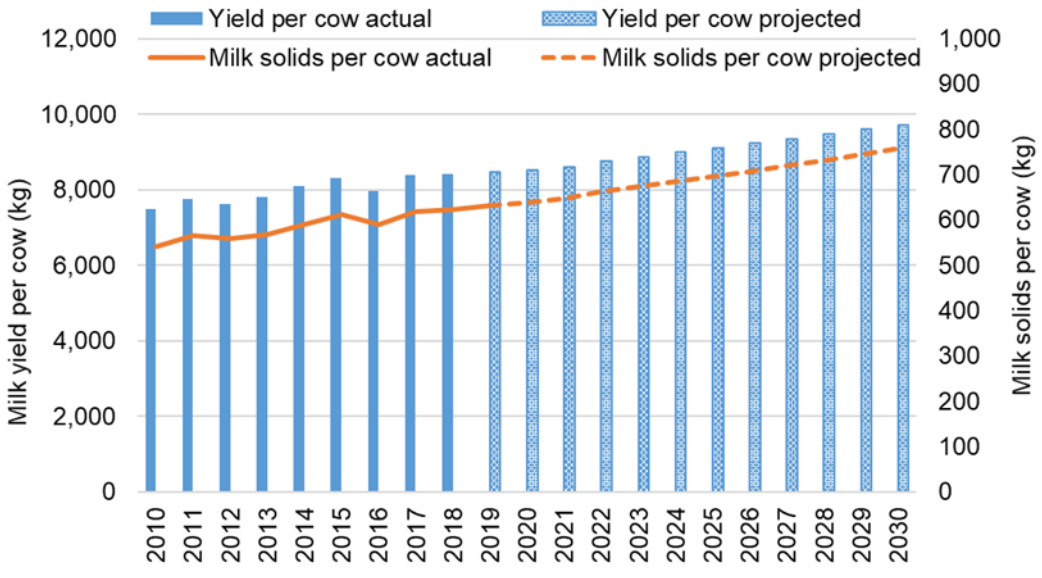
Source: Defra, projections AHDB

PRODUCTIVITY

Predicted growth in milk production in south-west England comes from increasing productivity outweighing the decline in herd numbers. At a GB level, we have historically seen growth in yield per cow in the range of 1.5%-2.3% per year, which comes from the cumulative effect of improving herd genetics, and improving farm practices. The projections indicate that yield per cow could increase by 9% between 2019 and 2030, from just over 8,200 kg/year to just under 9,000 kg/year.

The projections also indicate an improvement in milk solids production, from both the increased overall production, and a higher solids content (butterfat + protein). Of the two components, butterfat is more easily influenced and therefore likely to drive more of the growth in solids content.

Figure 2: Dairy cow productivity projections to 2030



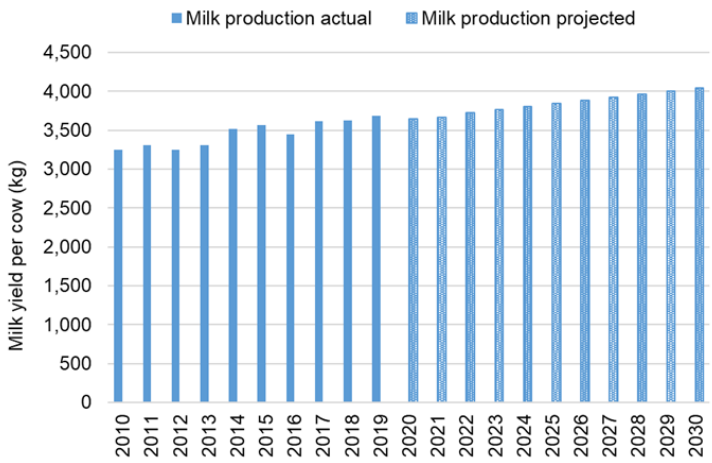
Source: AHDB, Defra, Eurostat, projections AHDB

MILK DELIVERIES & PROCESSING CAPACITY

Milk production in south-west England is expected to increase by 12% between 2019 and 2030, from 3.6 million tonnes to 4.0 million tonnes, if recent production trends can be maintained. This would come from increased productivity per cow, outweighing the decline in the herd size.

At the same time, the number of dairy plants in the region is expected to reduce from 13 to 9 in the same period, also based on previous trends. Expectation is that the remaining plants will increase throughput to offset the losses from closing plants.

Figure 3: Projected milk deliveries to 2030



Source: AHDB, Defra, Eurostat, projections AHDB

We do not believe the reduction in plants will limit milk production. Milk could be processed in neighboring regions of the UK. Therefore, the whole GB processing picture will affect south-west England's processing capacity – though this will also require investment in infrastructure to achieve it. Analysis indicated that any investment should be focused on cheese and yoghurt production, though niche products such as bespoke milk powders could also be profitable. (Source: AHDB analysis).

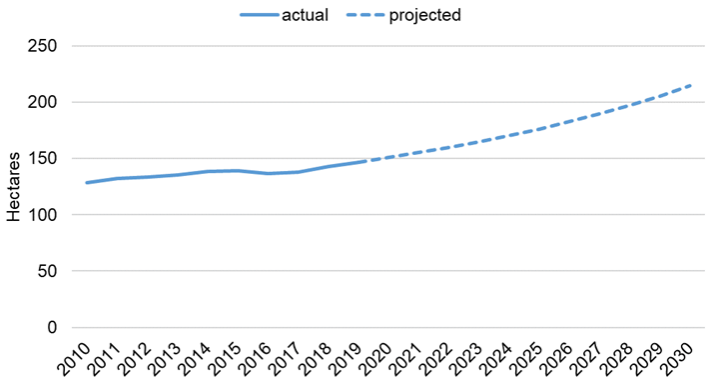
DAIRY FARM STRUCTURES

There were 2,200 dairy farms in south-west England as of 2019, according to Defra figures of what they call 'commercial dairy holdings'. This is projected to fall by 37% to just under 1,400 farms by 2030.

In England as a whole (regional data not being available), 0.9% of commercial dairy holdings had less than 10 cows on them, with the share expected to fall to 0.4% by 2030. Most farms had more than 100 cows – 86% in 2019, expected to rise to 95%. Farms with less than 100 cows are expected to lose share. As farm numbers are expected to decline, this suggests that this 50-100 group is likely to leave the industry and their herds be sold to others. However, these farms expanding into the 100+ categories is also an option. As farm numbers decline, we would expect many remaining businesses to expand their herds. Average herd size is projected to increase by 54%, from 194 cows to 299.

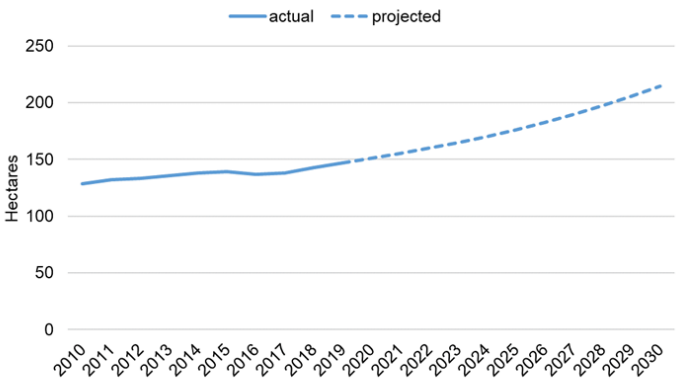
Average farm sizes in south-west England could increase by 46%, from 147ha in 2019 to 215ha in 2030, if the trend of recent years continues. This would likely come from farms consolidating as farmers leave the industry.

Figure 4: Average dairy farm size in England*



Source: Defra, projections AHDB
*Commercial dairy holdings by defra classifications. England used as regional breakdown not available.

Figure 5: Average dairy farm size in south-west England*



Source: Defra, projections AHDB
*Commercial dairy holdings by defra classifications

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Environmental policy

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 south-west England dairy sector to 2030.

GREENHOUSE GAS EMISSIONS

The UK's aim is to reach net zero emissions by 2050, and the National Farmers' Union (NFU) has announced an aim to get Agriculture in England and Wales to net zero by 2040.

Significant action will need to be taken in order to achieve these targets. However, the UK's track record is not great on this front. According to AHDB: "In domestic legislation, the Climate Change Act 2008 committed the UK to reduce greenhouse gas emissions by 80% from a 1990 baseline by 2050. This led to UK agriculture adopting the Greenhouse Gas Action Plan (GHGAP), aiming for a reduction of 5.2 Mt CO2e by 2020 – we missed, achieving only about a third of this objective. This is a problem for agriculture, as all other industry sectors have made bigger cuts in their emissions." (Source: AHDB) Nevertheless, renewed target of net zero by 2050 provides an opportunity for Agriculture to increase their contribution to reductions, and the commitment to 2040 may help it achieve this.

As well as traditional reduction of emissions, there are also discussions around the potential for Agriculture to be used to offset carbon. However this is still mainly just an idea, due to difficulties in reliably measuring carbon capture, particularly in soils.

AGRI-ENVIRONMENTAL POLICY

The departure of the UK from the EU also meant a departure from the EU's common Agricultural Policy. This gives the governments (with agricultural policy being devolved) the opportunity to develop their own replacement subsidy schemes. For England, the government is going with the mantra 'Public money for public goods' – that is, removing the basic payment and replacing it (not necessarily completely) with agri-environmental schemes. As of 2021, the plan to phase out basic payments is already underway, while the first new environmental schemes, the Strategic Farming Incentive (SFI), was beginning early trials. Two more schemes, the landscape Recovery (LR) and Local Nature Recovery (LNR), were only announced in early 2022, and are yet to be trialed. These new schemes should incentivise increased environment work from farmers – but the gap between old schemes and new will add increased financial pressure to English farmers over the coming years.

INDUSTRY RESPONSE

The UK dairy industry came together and released the UK Dairy Roadmap in 2008, with the aim of "to improve the environmental sustainability of the UK dairy sector whilst ensuring the continued prosperity of the industry" (Source). It has set out a wide range of targets for both farmers and processors, covering climate change, energy, water, landfill, plastic & packaging, waste, biodiversity, soil and air quality.

In response to the UK's commitment to net Zero by 2050, the Roadmap has extended its targets to meet this goal. More details can be found in their document "The dairy roadmap climate ambition: supporting UK net-zero"

In summary, there are potentially significant environmental constraints in realising some of the projections outlined under a business-as-usual scenario to 2030.

REFERENCES

https://ahdb.org.uk/news/what-might-the-uk-dairy-industry-look-like-in-2030

https://ahdb.org.uk/news/blog-environment-act-2021-how-does-it-impact-farmers

https://www.gov.uk/government/publications/net-zero-strategy

https://www.dairyuk.org/wp-content/uploads/2021/11/Dairy-Roadmap-Climate-Ambition-Final-Version.pdf

https://www.nfuonline.com/updates-and-information/achieving-net-zero-meeting-the-climate-change-challenge/

Contact : Katherine Jack and Lis King

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