

What's the beef?

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As I start to write this article the world has gone into a Covid19 lockdown and the long-term impacts on society and the economy are unknown. Schools and workplaces are shutting, and there are shortages of some foodstuffs on supermarket shelves as panic buying has ensued. In reality, the farming sector is in a position to ride out the storm “*people have to eat – after all*”.

However, in the long term this will put an enormous squeeze on the public purse, and the Government's priorities for supporting other sectors may eventually divert monies from agriculture. You just have to consider cancellation of international travel and people hunkering-down within the UK, to realise the devastating impact this will have for the tourism sector – something that will also hit many diversified farm businesses. The impacts of Covid19 may indeed make society and (some) politicians reassess the importance of more local food supplies – and that should be welcomed. That said, when this eventually passes food supply chains will likely revert to pre-Covid19 norms to a large degree – acknowledging our need to import key foodstuffs like fruit and vegetables.

This takes me to my headline – “What's the Beef?” There are undeniable, and significant, long-term changes coming to UK and Scottish agricultural and land management policy. Policy makers are now determined to ensure that in the future agriculture plays its role in meeting ambitious Climate Change and biodiversity targets. There is no point hiding behind the couch, closing your eyes and ears, and saying “la la la” on this one. This is the indisputable direction of travel, and future support will be linked to emissions and delivery of “public goods”. Whilst there will be claim and counter-claim on the impacts of farming on global warming, the science is pretty clear – and Policymakers are listening to the science.

Some of SRUC's recent and current work is being brought to the forefront within this climate-emergency context. I have always been concerned that there is a lack of understanding of the realities of our beef supply chain within the corridors of power - largely as suckler cows and calves are all lumped together for statistical purposes. Therefore, within the Scottish Government's Strategic Research Programme 2016-2021 we have been working with cattle movement data to give new, unique, data insights to how Scotland's beef sector is structured. From this we can also assess how well the sector is performing – including at business level.

Beef supply is a complex thing, meaning our analysis is not straight forward. Everyone in the industry knows there are a wide range of suckler calf producers, rearer finishers, dairy-beef calves and a variety of specialist finishers

– systems are not represented in datasets. The dynamic nature of the industry and the long-term nature of conception-to-slaughter in our ‘beef supply chain’ adds challenges to our analysis. We have therefore taken individual cattle data and aggregated data to business level, taking account for all cattle born, brought-on, or sold-off a farm.

We have been able to provide a new classification system for Scottish beef – where we now can provide new insights on business, sector and system performance. The data highlights just how dominant spring / early-summer calving has become – meaning phasing of finishing these calves is required to ensure that abattoir throughput remains consistent throughout the year. The sector is dominated by relatively few large businesses – particularly in the finishing sector. Half of the 10,792 businesses involved in the beef supply chain registered fewer than 30 calves in 2013 and only 200 businesses accounted for over half of the 2013 born prime stock (406 businesses had two-thirds of prime stock throughput).

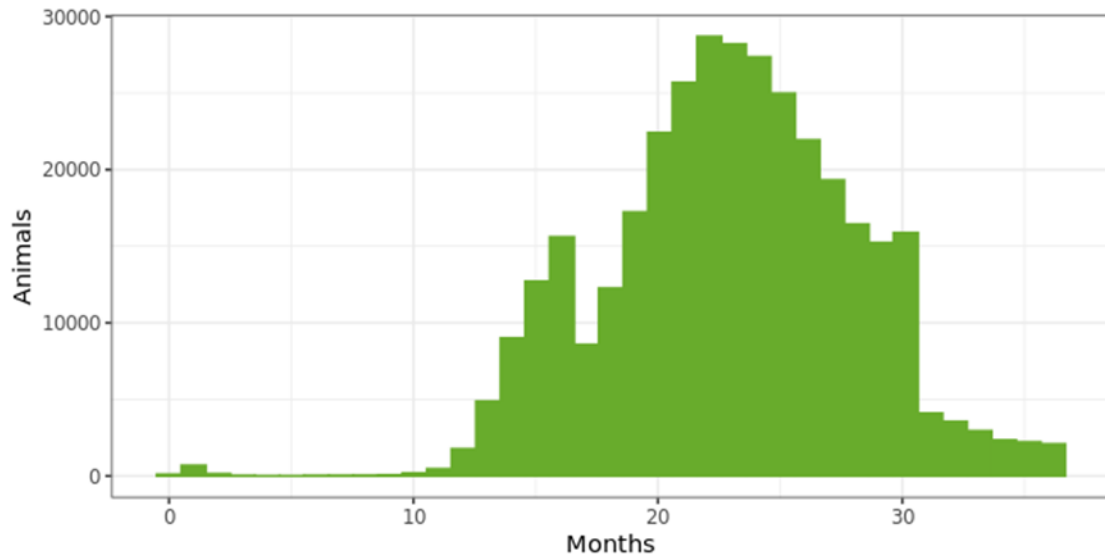
Proportion of businesses calves and prime stock by beef system

Beef System	Businesses	2013 total calves	2013 suckler calves	Prime cattle finished from 2013 cohort
Extensive upland suckler*	18%	10%	14%	0%
Extended upland suckler`	36%	34%	47%	3%
Lowland suckler	9%	6%	8%	1%
Rearer finisher	9%	15%	20%	20%
Early finisher	5%	2%	2%	28%
Late finisher	6%	2%	2%	34%
Dairy	11%	29%	0%	10%
Unclassified	7%	4%	6%	3%
Total	10,792	558,077	398,573	349,871

**calves sold at weaning `calves sold about yearling*

Our first briefing paper has looked at “finishing time” as there has been policy interest in how carbon footprint can be reduced by finishing animals faster. We took all Scottish calves registered with BCMS in 2013 and followed them through to slaughter. We estimated that the average (median) age of slaughter was 699 days or 23 months.

Age at slaughter of cattle born in Scotland in 2013 (beef and dairy)



A prime animal's carbon footprint is not simply a function of the age of animal at slaughter but is also affected by feed regimens, slurry and manure management, use of synthetic fertiliser, fuel use, etc. The climate change impact of Scotland's beef system is also affected by on-farm inefficiencies, so we are also looking at mortality rates, calves registered per 100 cows, calving intervals, age at first calving, heifer replacement rates, etc. These are all vital measurements and it is clear from our initial results that improved management of stock could go a long way to mitigating the carbon footprint of a kilo of beef – and would have the added benefit of putting more money in farmers' pockets. Once we have done the first round of analysis we will re-run the analysis for the 2014, 2015 and 2016 cohorts of calves

Policy makers are determined to get Scottish agriculture to a position of "net zero" emissions and therefore using all the policy tools (carrots, sticks and knowledge exchange) available to them to drive improved on-farm efficiency is undoubtedly coming. It is no surprise that the new short life working group looking at future support for the beef sector (led by Jim Walker) is called the 'Suckler Beef **Climate** Group'. The future is certainly not what it used to be – and whilst that will create challenges for some farmers, it will provide opportunities for some within the sector .