McCracken, D. 2021. Studying for a better future for our ruminant farming. *Press & Journal*, 30th January 2021. https://www.pressreader.com/similar/282583085683420

Studying for a better future for our ruminant farming

The ongoing covid pandemic is still restricting how my team engage in research projects. But despite that - and Brexit – we have retained our European and international connections.

I've mentioned in previous articles our range of EU-funded sheep projects - where we are working with partners across Europe, Israel, Norway and Turkey – and our links with New Mexico State University and their cattle ranching project in south-western USA.

We are also well connected at an even wider level via our membership of the Global Farm Platform initiative.

This partnership – formed in 2012 - brings together institutes from across the world and includes research farms from far afield as Australia, Brazil, England, France, India, Ireland, Kenya, Uruguay, USA and Wales.

A major factor that stimulated the initiative was the simplistic approach being taken at the time – and continuing now – by some sectors of society to group all livestock systems together and demonise them collectively in the face of climate change.

And this was occurring despite widespread recognition that ruminant livestock production systems do have an important role to play in contributing to food security, sustainability and poverty alleviation across the globe.

Indeed, almost all of the world's milk and much of its meat come from ruminant animals - mostly cows, goats and sheep, but also buffalo, camels, llamas, reindeer and yaks.

The founder members of the partnership have highlighted a number of strategies for cutting the environmental and economic costs of keeping these animals while boosting net gains for the quantity and quality of the food they produce.

For example, livestock consume an estimated one-third or more of the world's cereal grain, with 40% of such feed going to ruminants, mainly cattle. But some of this is avoidable, since ruminants can graze pastures and can eat hay, silage and high-fibre crop residues that are otherwise unsuitable for human consumption.

In addition, mismanagement and poor welfare also render animals particularly susceptible to parasites and disease. This lowers yields, increases environmental impacts and decreases farmers' ability to select the best breeding stock. With education and some financial aid, farmers can improve husbandry and more animals would survive to become productive.

We joined the partnership in 2018 because many of these issues – whether it is keeping livestock healthy, raising regionally appropriate animals or tracking costs and benefits - are just as relevant to upland farming systems in Scotland as they are to farms in Africa, Asia or South America.

We last met members of the initiative at Rothamsted Research's North Wyke farm platform in Devon just before lockdown last year. At that meeting we discussed and agreed how best to exchange data from each platform and identified priorities for the use of that data.

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The partnership exists to share skills and knowledge and help identify the most efficient ruminant livestock production systems under contrasting climatic conditions. Animal breeding and feeding strategies will have an important role to play in helping achieve this.

So our first collective output – published in early January - collated information from across the global network to highlight key changes in the genetic and nutritional approaches relevant to each system which, if implemented, would help shape more sustainable future ruminant livestock systems.

We are now considering the characteristics of the different farm platforms – encompassing a wide range of soil types and livestock species and breeds – and what livestock densities and other changes would be needed to make each farm carbon neutral.

Given the amount of woodland we have already integrated into our farms at Kirkton & Auchtertyre we are likely to be close to that neutral level. But we'll see what the number crunching says!

Davy McCracken
Head of SRUC's Hill & Mountain Research Centre