**Benchmarking & Business Resilience**

Farming is driven by market demand and now more than ever things are in flux and an uncertain market is a dangerous position to be in. When businesses are most at threat it is good practice to take stock of current practices, minimise manageable threats to the business and identify areas of strength, for growth and development.

Established in January 2020 the group Net Zero Arran is a discussion group looking to identify common areas for business improvement among farms on the island and to propose opportunities for investigation. The group is made up of a collection of different farming enterprises on the island, ranging from traditional beef and sheep units to dairy, arable and small scale fruit and veg growers, the group is also supported by representatives for Arran’s processors and retailers. The hope with the group is that by incorporating farmers from every sector and members within the supply chain the group can take broad but comprehensive steps to building local business resilience.

With such a wide variety of farms with their own unique challenges it was important that the group could target the issues that effect most businesses and in doing so be an effective use of time and resources. The group uses AgreCalc© to carbon benchmark, generating carbon footprints for each of the farms involved in the project and each individual enterprise within each of the farms. Each farm provides their inputs, production figures and sales over a 12 month period and the system generates a carbon footprint (kg emissions/kg output) in a manner familiar to anyone participating in the Beef Efficiency Scheme (BES) or those following the work of Farming for a Better Climate.

So why benchmark like this, well AgreCalc© allows each business to generate their own carbon footprints, it also compares the farm’s performance to predetermined standard data, in terms of emissions, key performance indicators and importantly evaluates the opportunity level for improvement in a number of areas. It was the latter of these functions that was particularly important to the group, using the metric to determine which factors within the production system would benefit most from improvement.

**Table 1 – carbon footprint results per enterprise**

|  |  |  |
| --- | --- | --- |
| **Enterprise** | **Group Average** | **Standard Data Average** |
| Beef | 44.73 | 42.49 |
| Sheep | 34.95 | 30.74 |

\*kg CO2e/kg output dwt

**Chart 1 – carbon footprint comparisons to standard data per enterprise**

Following the initial auditing process, the group identified common areas within each other’s businesses where opportunity for improvement was notable, these included inorganic fertiliser use, electricity and fuel consumption.

Throughout 2020 the group undertook soil analyses to determine soil pH on their farms, with the working hypothesis that inorganic fertiliser use was high because of a historic low soil pH and consequently poor utilisation of the nutrients present within the soils on the island, this is still to be proven but with an average soil pH within the group of 5.28 there may be merit to that suggestion.

Going forward into 2021 the group look to continue investigating the issues that impact the farms of the island, include the importance of lime, monitoring of fuel and electricity but also other areas of interest, like a potential buying group for the island and a landscape scale conservation project to enhance Arran’s natural capital reserves and protect national priority species. Also key will be a general drive to improve the key performance indicators for beef and sheep enterprises in, taking steps to improve calving and lambing percentages, growth rates and sale weights.

An increase in sold output from each of the businesses, regardless of whether it is with beef or lamb should decrease the carbon footprints of the group by proportionately increasing the output that offsets the emissions, a combination of this and steps to reduce emissions will drive down the individual and group carbon footprints, improve farm performance and build resilience.

At a time where climate change has never been a greater priority, a time of great uncertainty, when food production and food miles are becoming more important and farmers are being asked to demonstrate innovative thinking and provide public good, perhaps there is room for more benchmarking and greater networking.

For those interested in having a carbon audit completed FAS provides support for funded carbon audits, additional advice and information on this can be found at <https://www.fas.scot/carbon-audits/> Sign up to the FAS newsletter to receive updates on news, events and publications from Scotland’s Farm Advisory Service. You can also follow FAS on Facebook and Twitter @FASScot.