# The Spark

SEFARI Gateway's Newsletter

Welcome to the February 2024 edition of The Spark, SEFARI Gateway's (Centre of Expertise for Knowledge Exchange & Innovation) newsletter, a monthly update on the latest research developments from the Scottish Government's Environment, Natural Resources and Agriculture (ENRA) strategic research programme. The ENRA Research Portfolio provides evidence for policy and practice across environment, climate change, biodiversity, land use, agriculture, food, and rural

Scottish Government
Riaghaltas na h-Alba

## Making silk purses out of sows' ears – challenges and opportunities facing the Scottish Pork Sector

Scotland's pork sector is under financial pressure with producers leaving the market. ENRA-funded scientists looked at research that could support pork producers. One way to support producers is to add value to the product to achieve a higher price. First of all, Rowett and SRUC researchers wanted to find out from consumers if there is a retail market for value-added Scottish pork products.

The study investigated whether UK consumers are willing to pay a price premium for value-added pork products. It found there is a willingness to pay a premium for Specially Selected Pork. Scottish consumers are more aware of this label and were willing to pay a higher premium for it. In Scotland, Specially Selected Pork is the most valued assurance scheme-related label. In the rest of the UK, Red

Tractor (£1.84) is the most valued assurance scheme-related label, followed by RSPCA Assured (£1.43) and Specially Selected Pork (£1.39). UK consumers are also willing to pay a premium for other labels. The results suggest that the combined use of the Specially Selected Pork and at least one other label could significantly increase the desirability of Scottish pork in the UK.

Origin was found to be the most valued pork attribute by consumers in both sub-samples (i.e., Scotland, rest of the UK). In Scotland, consumers are willing to pay a premium of £3.33 and £1.17 for pork labelled as "Scottish" and "British", respectively. Pork consumers in the rest of the UK were found to be willing to pay a higher premium for pork labelled as "British" (£2.42) than pork labelled as "Scottish" (£1.58). As well as this consumer analysis, the research also looked at ways of improving production. Research with an organic pork producer found that it was better for the business to buy in live sows rather than breeding them on the farm. Income was benefitted from establishing an onsite butchery; parts of the pig that might have gone to waste were turned into sausages and salami.

## Tariffs to Support Scottish Soft Fruit Producers?

Could tariffs support Scottish domestic soft fruit production and help the population improve their nutrient intake throughout the year? ENRA funded research by scientists at the Rowett Institute and SRUC on soft fruit price elasticity could help answer this question.

Generally, price elasticity in soft fruit has been reported as being the same throughout the year. In fact, this is incorrect because consumers sensitivity to price changes according to the seasons. Not surprisingly, people tend to buy more soft fruit when prices are low and less when prices are high. In general, buyers are very responsive to prices in winter/spring when soft fruit is less plentiful. Conversely, they are less sensitive to price changes during the harvest period in Autumn/Summer. In other words, if tariffs on imports were to be considered during summer and autumn when domestic supply is high then the difference in price between domestic and imported fruits would need to be more significant than at other times.

Tariffs would also need to vary between fruits. Cherries and strawberries had the biggest variations in consumers sensitivity to prices in contrast to grapes which had the smallest price change. Most demand for grapes is met by imports of course. Tariffs could be applied during autumn and summer to support domestic production and lifted during winter and spring to support nutrient intake.

# New calving intervals and beef support payments informed by ENRA research


Longer calving intervals equate to longer periods during which a cow is incurring maintenance costs such as feed and veterinary care but also emits greenhouse gases without contributing to actual beef production. Databases and metrics developed in the current SRP have helped inform a research report on calving intervals to support the development of future agricultural policy. The mean calving interval across all animals is around 400 days, higher than the median of less than 370 days. For example, the worst 10% of animals have a calving interval of around 480 days. This equates to each of them emitting c.0.9t CO2e more between calvings than the median animal. The Cabinet Secretary for Rural Affairs, Land Reform and Islands announced a new calving interval conditionality measure will be introduced coupled with beef support payments by 2025. SRP analysis and advice is currently informing the newly formed Scottish Suckler Beef Support Scheme Reform Stakeholder Group.

Analysis of cattle registration and movements data that helped develop an overview of cattle production in Scotland, and performance metrics was started in the 2016-2022 SRP. That initial work drew on the data held by EPIC and the joint outputs informed the Suckler Beef Climate Group and Scottish Government policy officials.

# New vet training to control disease in sheep and help reduce emissions

A Scottish Government-funded pilot project is training a team of vets to detect ovine pulmonary adenocarcinoma (OPA) in sheep using ultrasound scanning because there is a shortage of vets competent and confident in this procedure.

OPA is an infectious lung tumour of sheep caused by Jaagsiekte Sheep Retrovirus (JSRV). The disease is of great concern in the sheep industry as it causes heavy losses. By the time clinical signs are apparent the affected sheep may already have infected others with the virus. Ultrasound scanning is currently the best method for the detection of OPA lesions in live sheep before the development of clinical signs as no reliable diagnostic blood test is available.

This project is training a cadre of veterinary practitioners before rolling out to a wider group. Thirteen vets are enrolled in the elite training programme, facilitated by ENRA Scientist Chris Cousens and Phil Scott FRCVS. Participants will recruit farms and each aim to screen a minimum of 4,000 sheep every year. For the farms involved in the study, we anticipate reduced OPA incidence in affected flocks over two years. OPA control measures should increase farm efficiency and reduce greenhouse gas emissions. OPA control is part of the animal health and welfare interventions under future agricultural and rural support in Preparing for Sustainable Farming. ENRA scientists are also

collecting data to explore the potential of a blood test as a supplement to ultrasound scanning. This links with ongoing ENRA research on JSRV transmission and OPA development.


Vets participating in the ENRA research at the Moredun Institute

## Careers and skills for a future climate

Most young people are worried about climate change and its impact on their future, with many feeling powerless. Therefore, this project wanted to help with the school mission to "prepare children for the future", equipping students with skills and knowledge for the transition to net-zero and the green jobs underpinning this transformation.

Supported by SEFARI Gateway's Innovative Knowledge Exchange Fund, researchers at The James Hutton Institute, teachers at Bertha Park High School (Perth) and career advisors at Skills Development Scotland, overcame working in silos to co-design and pilot a unique model for participative knowledge exchange.

The event took place on 22nd November 2023 at AK Bell Library in Perth, with cross Portfolio support (BioSS; The Rowett Institute; CREW; ClimateXChange) and was attended by 69 S5/S6 students from 11 schools in Perth & Kinross, Dundee and Edinburgh. This was the first-time that young people, the future workforce, had been brought together with experts (40 people from business and research, and observers from Education Scotland and other third sector organisations) to discuss the challenges and drivers of change in key economic sectors.

Activities included co-designing the pathways to climate transition and identifying the necessary skills and jobs to deliver these outcomes in four major economic sectors: Agrifood & Environment, Engineering & Construction, Energy, Fashion & Clothing.

Young people provided recommendations for education, industry, and policy and the workshop showed their attitude had shifted, highlighting a feeling of empowerment created through this participative approach.


*Wordcloud of recomandations of young people for policy*

## Latest publications from SEFARI:

- Our latest booklet provides insights into some of the soils research undertaken and the positive benefits it delivers to Scotland, UK and Global soil health, biodiversity productivity and climate resilience.
- A briefing, by Ben Mccormick (a SEFARI Gateway Fellow), outlines how he's supporting work on the evaluation of agricultural produce.
- A SEFARI Gateway Fellowship report details research and technical developments made to enable the forecasting of harvest time crop yield as the growing season develops using satellite imagery, data integration and modelling.
- A SEFARI Gateway funded Specialist Advisory Group report, details evidence based actions that could be undertaken by potato supply chains to reduce GHG emissions.

We'd love to hear from you and receive your feedback on how we can improve our newsletter. Please contact us at info@sefari.scot with your suggestions.

*Scotland is playing a central role in developing environmental solutions to the global climate and nature crises, and the Scottish Government response is based on the strongest possible scientific evidence. The Environment, Natural Resources and Agriculture research programme is key to achieving this.*