The Spark

SEFARI Gateway's Newsletter

March 2024

Scottish Government
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Welcome to the March 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 community agendas.

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.

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.

Shaping the Science for Scotland's Food Future Summit 18 April

The Rowett Institute and Food Standards Scotland are hosting a food summit on 18 April at Dynamic Earth. The keynote speaker is Henry Dimbleby. The author of Ravenous and founder of Leon restaurants recently published the independent national food strategy for DEFRA. Industry speakers include Scotland Food & Drink and Food & Drink Federation Scotland as well as Public Health Scotland. The food summit will present some of the latest food research in the Strategic Research Programme and explore Scotland's future needs for food research. Speakers from the Scottish Government include the Minister for Agriculture and Connectivity, Jim Fairlie MSP, Mathew Williams Chief Scientific Advisor for ENRA, Ashley Cooke Deputy Director of Food, and Professor Julie Fitzpatrick, Chief Scientific Advisor for Scotland. Tickets for the event are available at this **link**.

SG's Cash First Policy: Research to inform implementation

There is significant food insecurity in Scotland and to tackle it, the Scottish Government has published a Cash-First report. This sets out what it will do to improve the response to financial hardship and reduce the need for emergency food parcels. To inform development of Cash-First policies, this ENRA **research** summarises findings from interviews with frontline food support workers.

We found that Cash-First is moving in a direction advocated by frontline food support workers, but that greater consensus is required concerning what cash-first and its wrap-around services will include and how they will be tailored to local needs. Our findings also suggest that the 'community hub' model, towards which many food support organisations seem to be moving, has potential to deliver, and in many cases is already providing, services envisaged by Cash-First.

It was emphasised that community hubs require flexibility to adapt to the needs of their local communities. For example, some participants felt that cookery classes and money advice were of central importance to helping their clients achieve food security, while others viewed such services as unnecessary and patronising to their local communities.

Addressing Depopulation Action Plan just published by Scottish Government

ENRA funded research is helping the Scottish Government to tackle depopulation in rural areas. Last month saw the publication of the **Addressing Depopulation Action Plan** which drew extensively on research conducted by Scotland's Rural College (SRUC) and the James Hutton Institute for the Strategic Research Programme (SRP). In September 2023, JHI launched **surveys** to understand the factors influencing the decision- making of rural and urban residents on places to live, and rural residents' decision-making around transport and local food. SRUC's "Reimagined policy futures: Shaping sustainable, inclusive and just rural and island communities in Scotland **(ReRIC)**" project is undertaking an in-depth exploration of three persistent 'wicked' challenges facing rural and island communities in Scotland: (i) demographic decline and ageing and out-migration; (ii) the lack of affordable housing and; (iii) exclusion and marginalisation.

Supporting the Scottish Seaweed Industry

SEFARI scientists at the Rowett Institute have **provided evidence** to support the growth of the Scottish Seaweed Industry, thanks to research funding from the Scottish Government. They have found that Scottish seaweeds can contain safe, dietary-relevant amounts of vitamin B12 and could therefore provide a sustainable, plant-based source of this exclusively animal-derived nutrient. This work involved collaboration with the Scottish Association of Marine Science (SAMS) and The Scottish Seaweed Industry Association (SSIA), and this finding provides a marketing opportunity that could help build sales for the sector. Research also tested and demonstrated that many Scottish seaweed species can provide safe, dietary-relevant amounts of many other micronutrients, including iodine, iron, magnesium and potassium. Farmed seaweeds were also shown to contain many of the same levels of micronutrients as wild seaweeds and therefore equally able to contribute as a source of these nutrients when produced at scale.

Celebrating International Women's Day

To mark the 49th International Women's Day we released two blogs showcasing some of our inspiring female colleagues and SEFARI work being done to support women in Scotland and around the world.

In the **first blog**, we meet our female colleagues working in SEFARI Gateway and find out about the variety of roles they undertake. The roles range from knowledge brokering to finance, and are vital in supporting research. They also share their perspectives on working in science and offer advice to anyone considering embarking on a similar career pathway.

The **second blog**, highlights some of the work being done by SEFARI researchers to improve the lives of women. From supporting rural women in the Arctic to make low carbon transitions, to assessing the gender pay gap, to sector-leading research affecting women's mental health and the creation of educational resources, our researchers are working hard to make a difference.

Protecting Scotland's Aberdeen Angus and combatting food fraud

How do you know if your burger is 100% Aberdeen Angus particularly when food fraud is on the rise. Detecting origin becomes much more difficult when food is cooked or processed and this presents a challenge for traditional methods of verification.

This is where **ENRA-funded science** comes in to help solve these problems. Analytical chemistry techniques, such as mass spectrometry (MS) and liquid chromatography (LC), are being used by scientists at the Rowett Institute to identify small molecules such as peptides, proteins and fats to check that labels correctly reflect the composition of foods. We can use this to determine exactly what meat is being used in a mixture such as the filing of a pie. It is like being a detective investigating a crime scene, but instead of fingerprints, scientists are looking at molecules to work out what went into the meal.

Our Publications:

- In a recent **blog**, we take a closer look at recent food inflation figures and discusses what may have caused food prices to be high, which food categories are most affected and what impact this could have on our dietary choices.
- A **case study**, focusses on a Scottish pork producer and provides insights into an enterprise serving the high value pork products market and the challenges it faces.
- In another **case study**, learn how we are developing "organoids", which are mini-organs from livestock grown in laboratory petri dishes, to study host-pathogen interactions at microscopic and molecular levels.
- Finally, read a SEFARI **report** that considers urban agriculture in the Scottish context.