



## InSHAW Newsletter Winter 2022/23

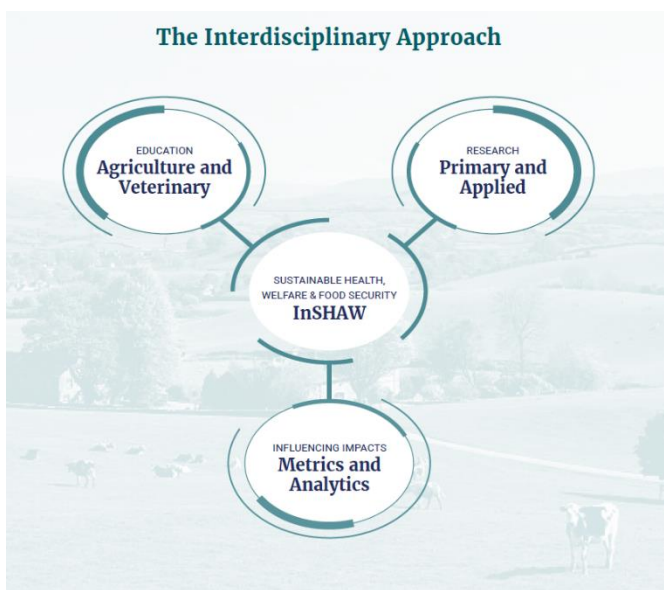
*ILG=ZR, PR, JO, HS & JMES*

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### Welcome to InSHAW

The world is in a turbulent state and so a collaboration of like-minded people and organisations committed to Sustainable Food Production and One Health might be even more important than we ever imagined. Since we connected last summer -both online and face to face at Harper and Keele Veterinary School-events around the world have remained volatile. Much has also happened in our areas of interest and so below we will share some news and also a look forward to future events and opportunities to make a difference.

InSHAW is the Institute for Sustainable Livestock Health And Welfare, based at Harper and Keele Veterinary School UK in collaboration with Harper Adams University, Keele University and RAFT Solutions Ltd. InSHAW has three main priorities in the field of Sustainable Food and One Health: Research -Education-Influence, with a mission to collaborate to support positive progress.



## Website and newsletter

See [www.inshaw.co.uk](http://www.inshaw.co.uk) for InSHAW going forward.

## Precision Livestock Farming (PLF) Conference York, UK 23<sup>rd</sup> & 24<sup>th</sup> November 2021

Somehow after a Covid 19 postponement the Precision Livestock Farming in Practice Conference went ahead a year ago, principally sponsored by GenTORE (H20-20) Kersia and InSHAW with Harper & Keele Vet School. We were delighted to run workshops on-farm at a 800 cow PLF rich dairy unit as well as sessions and the main plenary lectures and panel sessions at the York Biotech Centre York (home to the UK Food and Environment Research Agency: Fera).



Figure 1: Wildon Grange Dairy Farm



Figure 2: York Biotech Campus

Veterinary On-Farm Training Session (TICKET OPTION 1)		Precision Livestock Farming Workshops (TICKET OPTION 2)		All delegates – York Biotech Centre or Online	
09.00		Registration – York Biotech Campus		08.30	
10.30		Coach transfer to Wildon Grange Farm		Registration – York Biotech Campus	
Sustainable dairy; veterinary training on-farm*		Workshop 1		09.30	
Farm Tour and Talks from: Dr. Nic Friggens, Department of animal physiology and livestock systems, BIRAE Prof. Jonathan Statham, Chief Executive, RAFT Solutions and Veterinary Partner, Bishopton Veterinary Group		Precision Livestock Farming in action – What is possible?		Mastitis, milk quality and precision livestock farming diagnostics Prof. Andrew Bradley, Quality Milk Management Services and University of Nottingham	
Followed by Q&A session with: Prof. Stephen LeBlanc, Research Programme Director, Animal Production Systems, University of Guelph Dr. Ines Adriaens, Livestock Technology, KU Leuven University and Animal breeding and genomics, Wageningen Livestock Research		Early detection technologies Prof. Mark Rutter, Harper Adams University Integrating herd improvement and milk quality management through DNA testing Richard Miller, National Milk Laboratories Targeted methodologies for the reduction of lameness in sheep Dr. Ruth Clements, RCMG Oxford		10.30	
 <a href="http://www.gentore.eu">www.gentore.eu</a> *PLACES ARE LIMITED TO ENABLE A SMALL-GROUP TRAINING SESSION		Workshop 2		11.30	
16:15		Food Residues – Detection for Confidence The development of rapid microbial diagnostics for the agri-food sector. Dr. Rosario Romero, Fera Science Protecting our borders - plant health scanning at Heathrow Michael Andreou, OptiSense		The internet of things Robbie Walker, Alltech and Keenan	
Coach transfer to York Biotech Campus		Fera Tour Accompanied tour of selected Fera projects at the Biotech Campus		12.30	
17.00		Dr. Nic Friggens, INRAE 		Lunch	
19.45		Conference dinner The National Railway Museum, York		13.50	
				Veterinary applications of sensors and data Prof. Stephen LeBlanc, University of Guelph	
				14.50	
				What does 'Big Tech' offer precision livestock farming? Prof. Jasmeet Kaler, University of Nottingham	
				Followed by a panel debate chaired by Jonathan Statham, including: Governance and the responsibilities for protecting society Michael Seals, National Fallen Stock Company	
				What does precision livestock farming mean for consumers? Sophie Throup, Morrisons	
				Can primary producers harness the opportunities? Adrian Ivory, Strathisla Farms	
				15.50	
				Conference summary and next steps	
				16.00	
				Conference close	

Full conference program. All of the talks across the two days are available to view at <https://raftsolutions.co.uk/precision-livestock-farming-in-practice-conference/>



*Figure 4: Delegates in session*



*Figure 4: Nic Friggens and PLF*

It focused on the exciting technologies, systems and understanding that are driving sustainable livestock production across the World. Workshops, training sessions and practical visits accompanied presentations and discussion from international leaders in the field of precision livestock farming. The two-day conference attracted interest from progressive livestock producers, vets, policy makers and industry stakeholders, across all the livestock sectors.

Preparations are underway for PLF in Practice #2.

### **One Health Event at HKVS**

This event will be held on 8<sup>th</sup> March 2023 at HKVS.

AMR & BBSRC

**News Item:** [BBSRC investments 'likely critical' to UK AMR vision, experts say – UKRI](#)

**Report Publication Page:** [Evaluating BBSRC investments in antimicrobial resistance research – UKRI](#)

### **Events Round-up**

WCGALP Rotterdam

EAAP Conference Porto

'MANNA' EU Horizon Marie Curie project close

Brazil Sustainability Symposium



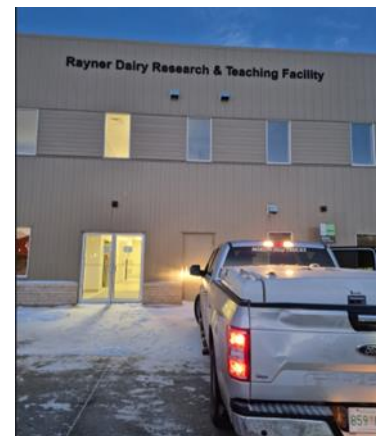
## Collaborations and Exchange programmes

Recent RAFT visit to Eastern & Western Canada as part of UKRI/NRC IRAP collaboration gave the opportunity to refresh old partnerships and initiate new ones as part of the InSHAW umbrella. Ontario Veterinary College (OVC) in Guelph, Ontario and Western College of Veterinary Medicine (WCVM) in Saskatoon, Saskatchewan were both visited and we enjoyed great hospitality and the sharing of ideas and like-minded perspectives on sustainable livestock health & welfare.

OVC:



WCVM:

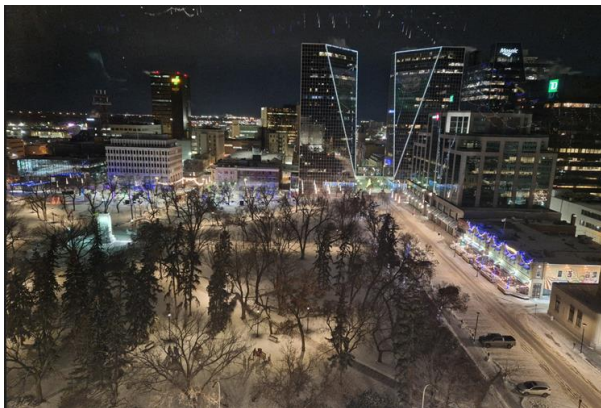




BVGL (Bow Valley genetics Limited):



'Agribition' week long cattle show in Regina, Saskatchewan (-28oC):



**REGINA**

**RENEWABLE ENERGY & ESG INNOVATION**

"[Regina has] what the world needs."

Mark Coates, CEO of Prairie Clean Energy

With a recent surge in alternative fuel opportunities from agricultural waste and residue, technological advances, and funding, there is no better time to capitalize on the ESG sector in Regina.

**Recent Growth Opportunities**  
Saskatchewan's strength in primary production is yielding major opportunities to enhance sustainability.

**Federated Co-operative Limited & AGF Feed and Ingredients Joint Venture**  
The newly formed JV seeks to construct a \$2 billion regenerative Agriculture Complex in Regina. The complex eventually will supply approximately 50% of the feedstock required for a 1.5, 0.00 tonne per day renewable diesel plant.

**Real Leaf Pulp Ltd. Combines Opportunity with Sustainability**  
Real Leaf Pulp has chosen Regina as the location of Canada's first non-wood pulp mill. The \$300 million facility will run almost entirely on composite refuse gas for use in packaging, tissue, and other paper products.

**Prairie Clean Energy Launch**  
Regina will soon be home for the first ever low carbon biomass processing facility in the world. Opening in 2022, PCE will utilize Saskatchewan's millions of tonnes of wood waste, farm straw and agricultural residue to provide an abundant, secure, and renewable supply of biomass fuel.

**Clusters of Innovation in Regina**

**BUSINESS FUEL**  
Being the centre of Canada's bread basket, agriculture and food processing has allowed producers the ability to identify new and innovative uses for by-products that were formerly seen as agricultural waste.

**CARBON CAPTURE UTILIZATION AND STORAGE**  
Saskatchewan has one of the world's largest carbon capture and utilization projects in the province. Resources like near 100% pure CO<sub>2</sub> from the Boundary Dam carbon capture and storage facility near Estevan.

**HYDROGEN**  
Business fuel such as hydrogenated renewable diesel needs a hydrogen source to complete the process. Research has begun on the production of a hydrogen hub in the Regina. Municipalities are beginning to look at the use of blue hydrogen.

Blue hydrogen is hydrogen produced from natural gas and is supported by carbon capture and storage. The CO<sub>2</sub> generated during the manufacturing process is captured and stored permanently underground. The result is low carbon hydrogen that produces no CO<sub>2</sub>.

**CANADIAN WESTERN AGRIBITION OFFICIAL SHOW GUIDE**

PRESENTED BY **SaskPower**  
Powering our future

**NOV 28 - DEC 3**





### **Data Science PDRA**

Position available for a data scientist 2 year position between RAFT & Keele early in 2023.

### **Education & training**

HKVS veterinary undergraduate course is now in year 3 and continues to integrate Sustainability, PLF and One Health concepts from year one including a PLF workshop day.

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Three training modules are in development for InSHAW with RAFT outreach and XL Vets:

- Sustainability and Net Zero Beef, Lamb and Dairy
- One health
- PLF Training Course

Farmskills/Vetskills Net Zero Beef Lamb and Dairy

### **Animal Health & Welfare Pathway**

This defra funded England project started on farm this autumn, with planned wide rollout from late January 2023.

<https://www.gov.uk/government/publications/animal-health-and-welfare-pathway/animal-health-and-welfare-pathway>