Calving Intervals – enhanced conditionality for reducing greenhouse gas emissions

John Armour & Steven Thomson



2nd Environment, Natural Resources and Agriculture (ENRA) Science, Evidence and Policy Conference

Our Dynamic Earth, Edinburgh 23rd September 2024





Science supporting SSBSS policy reform



John Armour – Head of Livestock Production Policy (Scottish Government)



Steven Thomson – Professor of Agricultural Economics and Policy (SRUC)

- The Scottish Government have announced that from 2025 coupled support for beef calves will have a new 410-day calving interval condition on mothers (excluding heifers)
 - This session provides an opportunity to hear how SRP research has supported & underpinned the evidence behind policy decisions

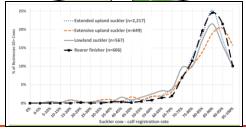




The net-zero climate challenge

- Climate Change (Emissions Reduction Targets) (Scotland) Act 2019
 - legally binding net zero target by 2045
- Climate Change Plan Update (2020)
 - ambitious 24% emissions reduction from agriculture by 2020-32
- Policy challenge how to meet CCPU target using incentive / regulation / knowledge exchange
 - Farmer-led groups established
 - Engage RESAS / SRP / commissioned research







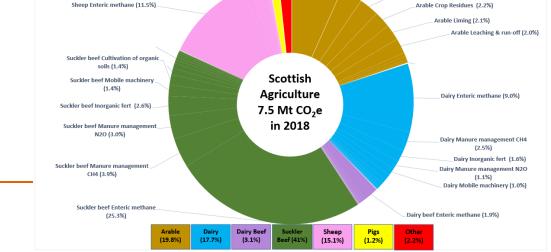


Identifying the opportunities

 Scottish Government is committed to maintaining direct agricultural support in new ARP support framework

> SSBSS c.£40m p.a. till 2028 but some question scheme given GHG profile

- A tool for enhanced conditionality?
- What measures would influence GHG inventory?



Arable Mobile machinery (6.7%)

Arable Inorganic fert (2.9%)

Arable Mineralisation (2.6%)

Other (2.1%)

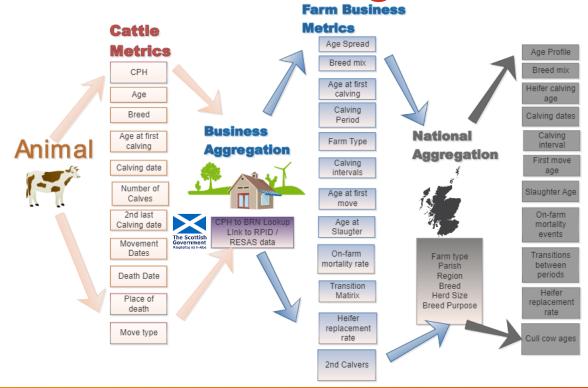
Pigs Manure management CH4

Sheep Inorganic fert (0.8%)

Sheep Grazing manure (1.0%)



Get data moooving!



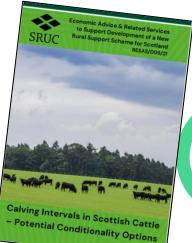
- Support has used data & outputs from last 2 SRPs
 - Data sharing agreements
 with APHA & Scot Govt (RPID and RESAS) underpin analysis
 - Draws on Coffey and Archibald <u>databases</u>, Dr Moxey <u>expertise</u> & SAC Consulting <u>ground-truthing</u>
 - Blends commissioned research, SRP projects, SRP underpinning support for policy & SEFARI gateway knowledge broker resources





Analysis - multi-year process

- Researchers co-designed report requests with policy: 410-day conceptual paper
- Trusted to undertake analysis & present options / findings
- Create the narrative that SG no longer willing to pay for excess emissions
- c.60k dams have CI > 410 days
- Calves >410 days have 8.6m excess cow days
- Calves >410 days have c.23k excess FTE cow years
- C.66.4k tonnes CO₂e emissions not supporting through SSBSS



Conceptual paper -RESAS

SG Policy Refined Analysis

ARIOB

SSBSS Reform Stakeholders

> Cab Sec 410-day Announcement







Support stakeholder engagement

SSBSS Reform Stakeholder Group

Bespoke analysis based on group requests

 Estimated Business level impacts proactively provided

 Supported advice to Scottish Ministers

 Further report on payment rate / mortality in response to industry
 concerns

Scotland: New calving interval of 410 days added to SSBSS

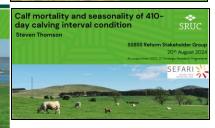
March 26, 2024 4:00 pm



seasonality of calving intervals















Cycle Cow conceives	Calf Born	Bull in	Cow conceives	Calf born (CI)
1 st	Day 0	Day 56	Day 56-77	Day 339-360
2 nd	Day O	Day 56	Day 77-98	Day 360-381
3rd	Day 0	Day 56	Day 98-119	Day 381-402
4 th	Day O	Day 56	Day 119-140	Day 402-423
5 th	Day O	Day 56	Day 140-161	Day 423-444
6 th	Day O	Day 56	Day 161-182	Day 444-465





info@sefari.scot





