



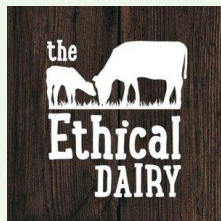
# Keeping cow with calf: Bringing innovation to Scottish dairying



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# Why are we interested in cow-with-calf dairying?

- Standard practice involves separation of cow and calf within 24h
- Consumers increasingly concerned about this practice globally
- Welfare benefits shown in calves and cows of staying together
- Increased consumer and industry concern around dairy-bred bull calves





# What is cow-with-calf dairying?

- Any housing or system where **calves** have **contact with the dam or a foster cow** – they may or may not be able to suckle
- Lack of common terminology
- Different levels of CwC and lack of understanding of these
- Sirovnik et al., aimed to provide definitions and propose common terminology

*Journal of Dairy Research*  
cambridge.org/dar

**Research Reflection**

**Cite this article:** Sirovnik J et al (2020). Methodological terminology and definitions for research and discussion of cow-calf contact systems. *Journal of Dairy Research* **87**(S1), 108–114. <https://doi.org/10.1017/S0022029920000564>

**Methodological terminology and definitions for research and discussion of cow-calf contact systems**

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# Keeping Cow with Calf: Bringing Innovation to Scottish Dairying

- How CwC systems perform in terms of **human, animal, environmental and financial health**
- **Economic analysis** of the CwC system at a farm level; calf growth, cow longevity, animal health and more
- **Business models and marketing** for CwC dairy products?
- **Prospectus** for those looking to follow the system



# Rainton Farm



- 125 dairy cows; Swedish Red x Montbeliarde x Holstein
- ~5000L milk (3000L @45p)
- Calves suckled to 5 months (2-2500L):  
*45-50 sold as rose veal at 7-12 months (350-400kg LWt, £850-1000). Balance to organic market at 16 months (500kg LWt, £1250)*
- 25-30 breeding heifers calving down at 24 months: *15-20 retained, balance sold at 20 months (£1350)*
- Milk utilised to make ice cream and cheese



# Human Health – social aspects

What happens to farmers' social ties within the CwC system?

- Links with other farmers operating CwC ↑
- Links with consumers ↑
- Different relationship with the animals ↑

*Farmer 4: "it's interesting how our relationship with the cows is evolving, from one of "they are animals, and we are humans" and that's where there's a wall, to one where we're all working together and we're part of this team and they have needs, they have concerns, they have emotions."*

- Animal health and welfare challenges ↓



# Human Health – social aspects

What happens to farmers “status” (cultural capital) within the CwC system?

- Calves that look really well ↑
- Reputational risk among farmers ↓
- Validation from consumers ↑



# Human Health – social aspects

What are the economic changes within a CwC system?

- New facilities ↑↓
- Time to train themselves and staff and animals ↑↓

*Farmer 1: “and you just have to have that patience, it’s not going to work overnight and the first year might be quite difficult and the second year might not be a lot better, but it will come.”*

- Direct sales rather than feeding into existing supply chains ↑↓

*Farmer 1: “It gives us something totally unique to offer to people and we have people who only buy our milk because of it.”*





# Human Health – social aspects

## Interview conclusions:

- Not only changes to working practice and infrastructure, but cultural shift in different relationship with animals, staff on the farm, other farmers and consumers
- Currently minimal infrastructure – research, supply chains, networks, advisory support etc.
- Difficult but fascinating and very rewarding



# Economics

## Benefits?

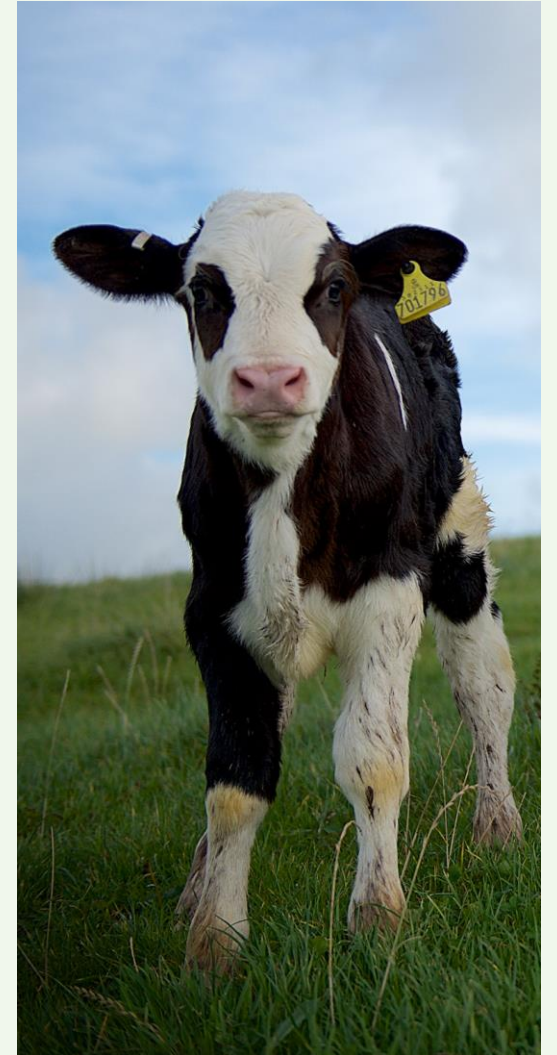
- Higher growth rates vs conventional systems
- Increased efficiency – in calf earlier/sold earlier reducing emissions
- Reduced medicine costs if herd health improves e.g., mastitis

## Challenges?

- Lower volume of saleable milk – third to half lost to suckling
- Hybrid system – outlet for beef needed
- Modification of farm facilities e.g., calf creep construction

## Are CwC systems profitable?

- Milk payment of at least 36-40ppl and premium beef sales needed to equal incomes of a similar sized organic herd



# Animal Health

## Benefits?

- Reduced SCC
- Reduced intra-mammary tubes - improved udder evacuation

## Challenges?

- Changed cow-calf environment can change disease risk
- Issues when establishing the system were overcome with management changes and appropriate vaccine use

## Key health finding?

- Antibiotic use was below RUMA 2020 targets and below estimated 2018 industry baseline of 17mg/kg PCU, sitting at 14mg/kg PCU, compared to RUMA target of 21 mg/kg PCU





# Animal Welfare

## **Cow-calf bonding**

- Important way to provide positive welfare for both

## **Human-Cow interactions**

- Cow-calf bonds can promote positive attitudes towards animals in staff members
- Promotes positive animal welfare and improves staff wellbeing

## **Cow and calf behaviour**

- Grooming during suckling reinforces bond
- Male calves suckled and were groomed more frequently than female calves

## **Weaning**

- Can be stressful due to bond for calf and cow
- Three-stage weaning least stressful (overnight separation, restricted suckling, full separation)



# Marketing

## Branding and values

- Branding is key
- Can be provocative – The Ethical Dairy
- Positive image
- Visual direct marketing needed

## Marketing and labelling

- Requires niche marketing
- Attracts those who value high animal health and welfare, environmental sustainability, what they see as ethical farming practices
- If future demand or policy change led to system changes, there may be potential for mainstream processing and sales



# Overall advantages?

- **Labour utilisation changes** – once daily milking, reduced calf feeding
- Increased **job satisfaction, work-life balance**
- Ready market – **consumers willing to pay**
- **Positive relationship** with consumers
- Potential **health and welfare benefits**
- Holistic whole farm approach = **benefits from cows through to environment**






# Overall challenges?

- **Lack of information** available – how to operate and different types of systems
- **Facilities: may need adapted**
- Management challenges: **under-researched**
- **Weaning:** separation can be distressing
- Economic: **less milk** with **higher costs**
- Economic: **market needed** for milk fattened calves
- **Reputational:** challenge from conventional dairy actors
- Lack of route to market, **direct selling** needed





*Keeping Cow with Calf  
Bringing Innovation to Scottish Dairying*

## KEEPING COW WITH CALF

*Keeping Cow with Calf - Bringing Innovation to Dairying In Scotland* is an SRDP Knowledge Transfer and Innovation Fund (KTIF) funded project, led by Scotland's Rural College (SRUC).

The project seeks to establish evidence based information on cow-with-calf dairying systems, including:

- How a cow-with-calf system performs in terms of human, animal, environmental and financial health

[www.keepingcowwithcalf.com](http://www.keepingcowwithcalf.com)

# Operational Group

**David Finlay:** *Rainton Farm/The Ethical Dairy*

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**Gillian Butler:** *Newcastle University*

**Bryce Cunningham:** *Mossgiel Farm*

**Katie Denholm:** *University of Glasgow*

**Kathryn Ellis:** *University of Glasgow*

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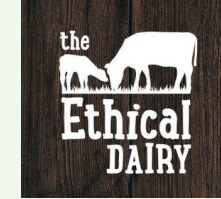
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**Geoff Simm:** *University of Edinburgh, Global Academy of Ag. and Food Security*

**Alex Tomlinson:** *FAI Farms*

**Gordon Whiteford:** *Lower Mill of Tynet Farm*





# Questions?

