THE UNIVERSITY OF BRITISH COLUMBIA
Animal Welfare Program
Faculty of Land and Food Systems



MANAGING CHANGE IN ANIMAL WELFARE:

Tradeoffs, Timelines, and Courage

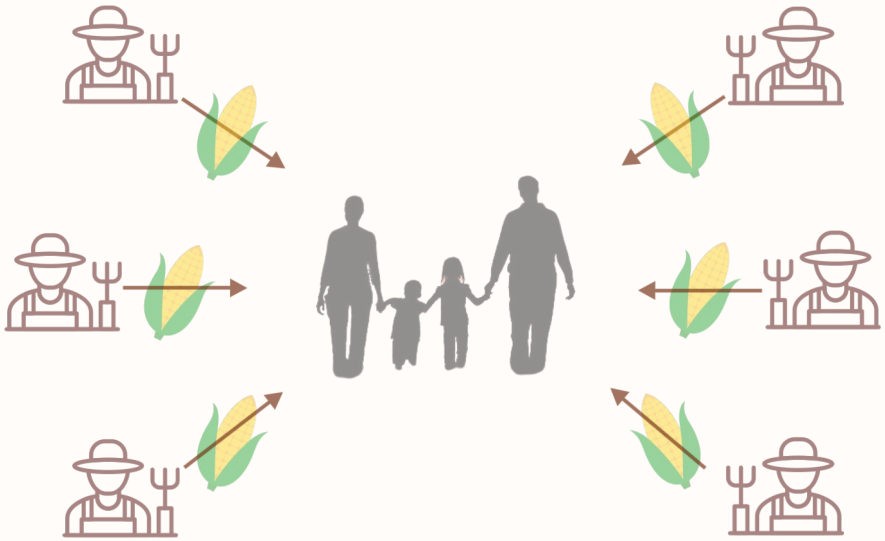
DR. MARINA (NINA) VON KEYSERLINGK, O.C., PHD
Email: marina.vonkeyserlingk@ubc.ca

Setting the stage

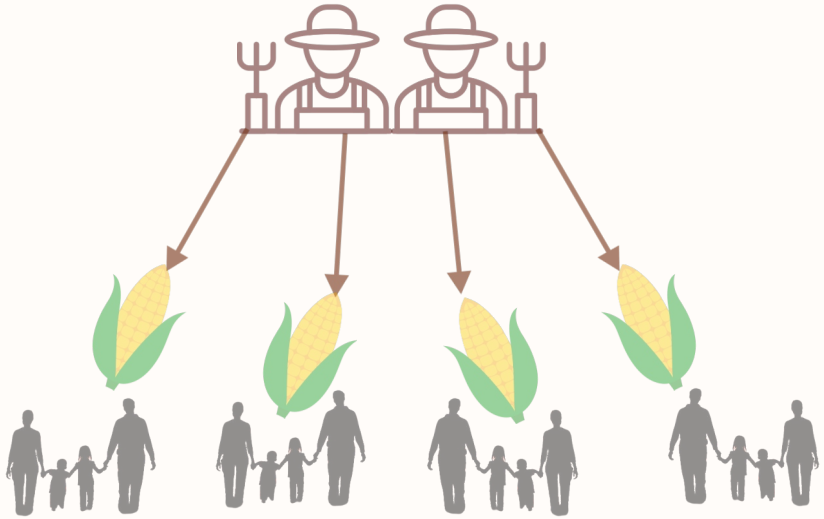


Most people still hold values about how food is produced without having direct involvement with food production

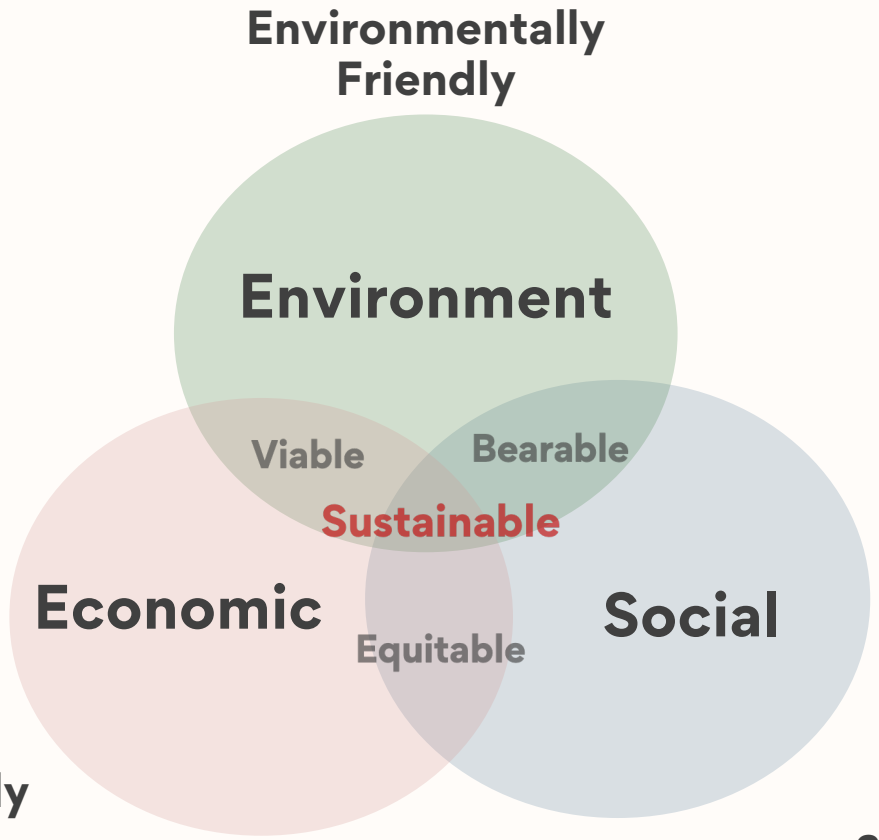
Agrarian Model
(Pre-1950)



Modern Food Production
(Post-1950)

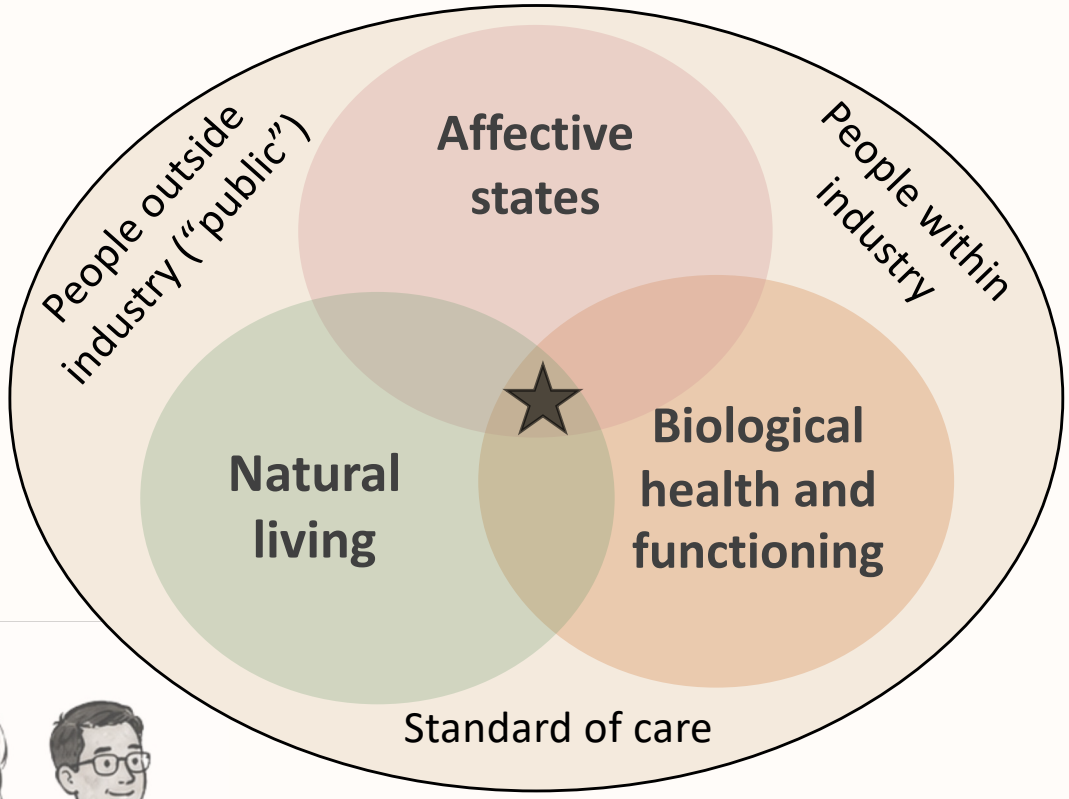


Sustainability: what does it mean?



See von Keyserlingk et al., (2013). J. Dairy Sci. 96 :5405–5425

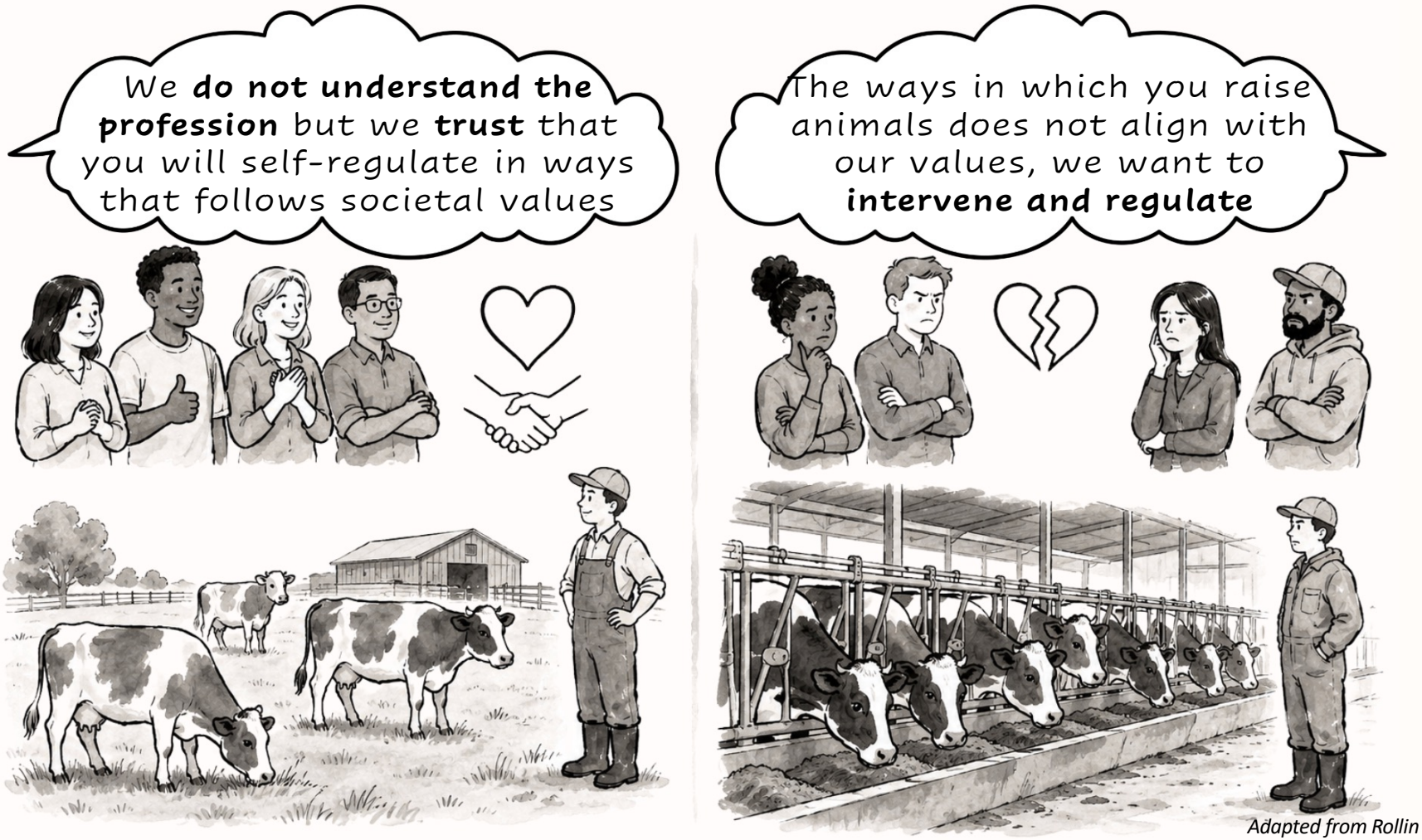
The **human** element of animal welfare





Fraser et al., 1997; von Keyserlingk and Weary, 2023

Social license to farm

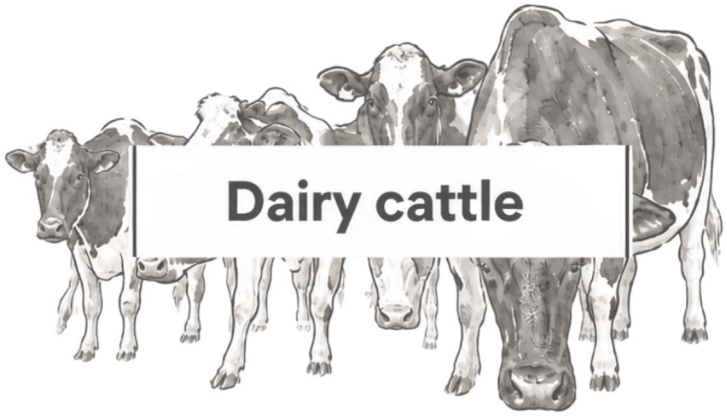


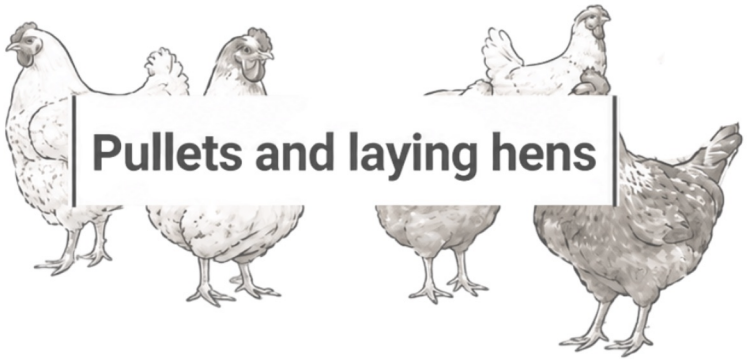
Adapted from Rollin 2011

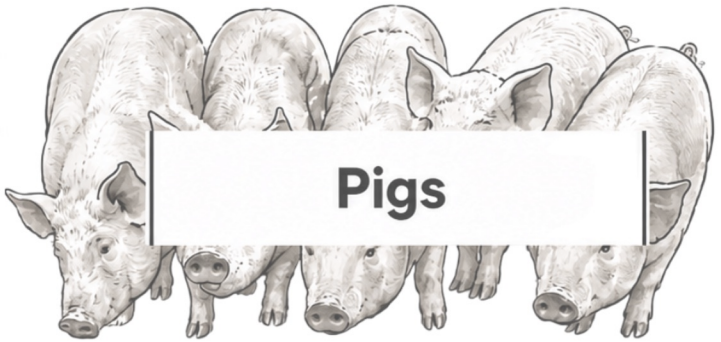
NATIONAL FARM ANIMAL CARE COUNCIL
CONSEIL NATIONAL POUR LES SOINS AUX ANIMAUX D'ÉLEVAGE

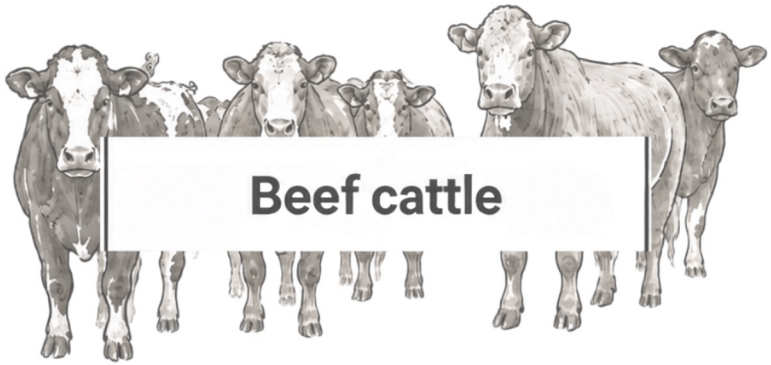
CODE OF PRACTICE

For the care and handling of...

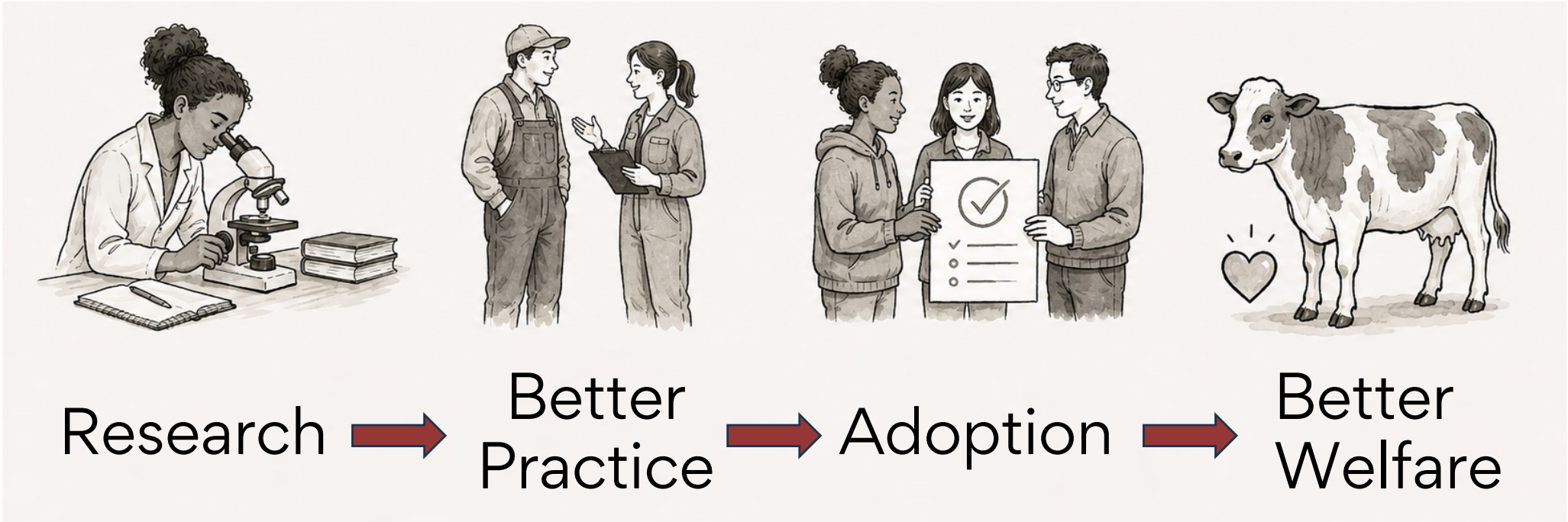




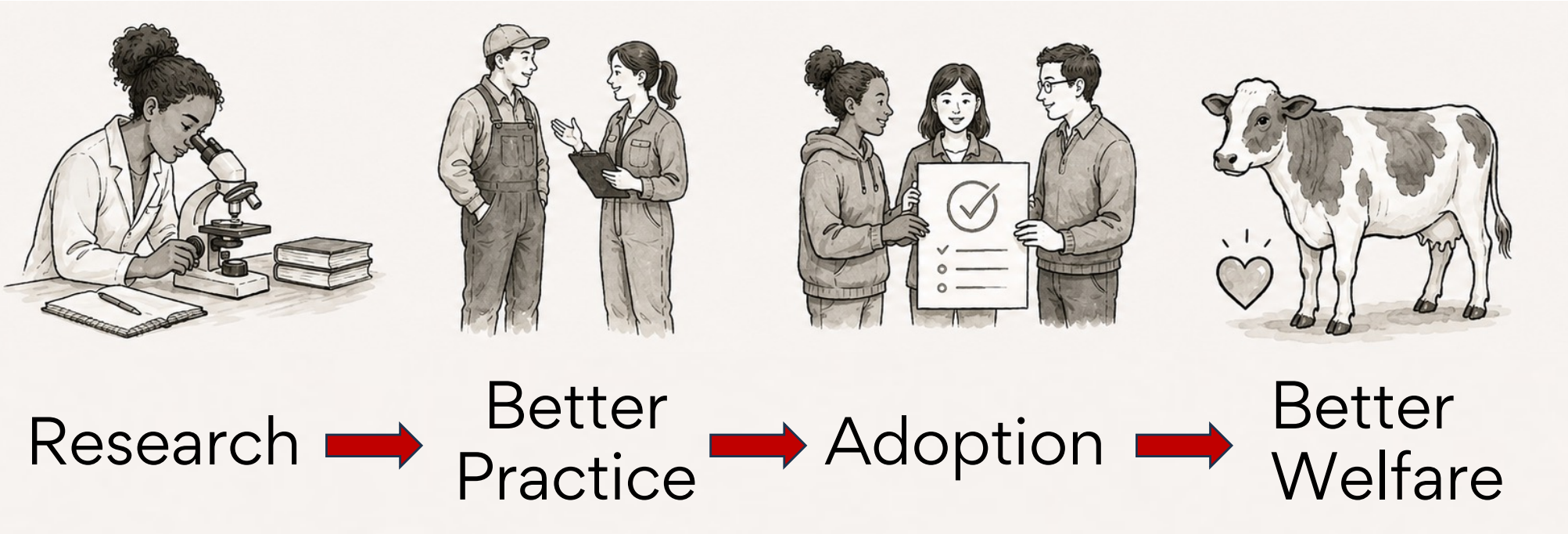




The simple story of change



In real systems, every arrow contains cost, trust, infrastructure, identity, politics, and competing definitions of “better.”

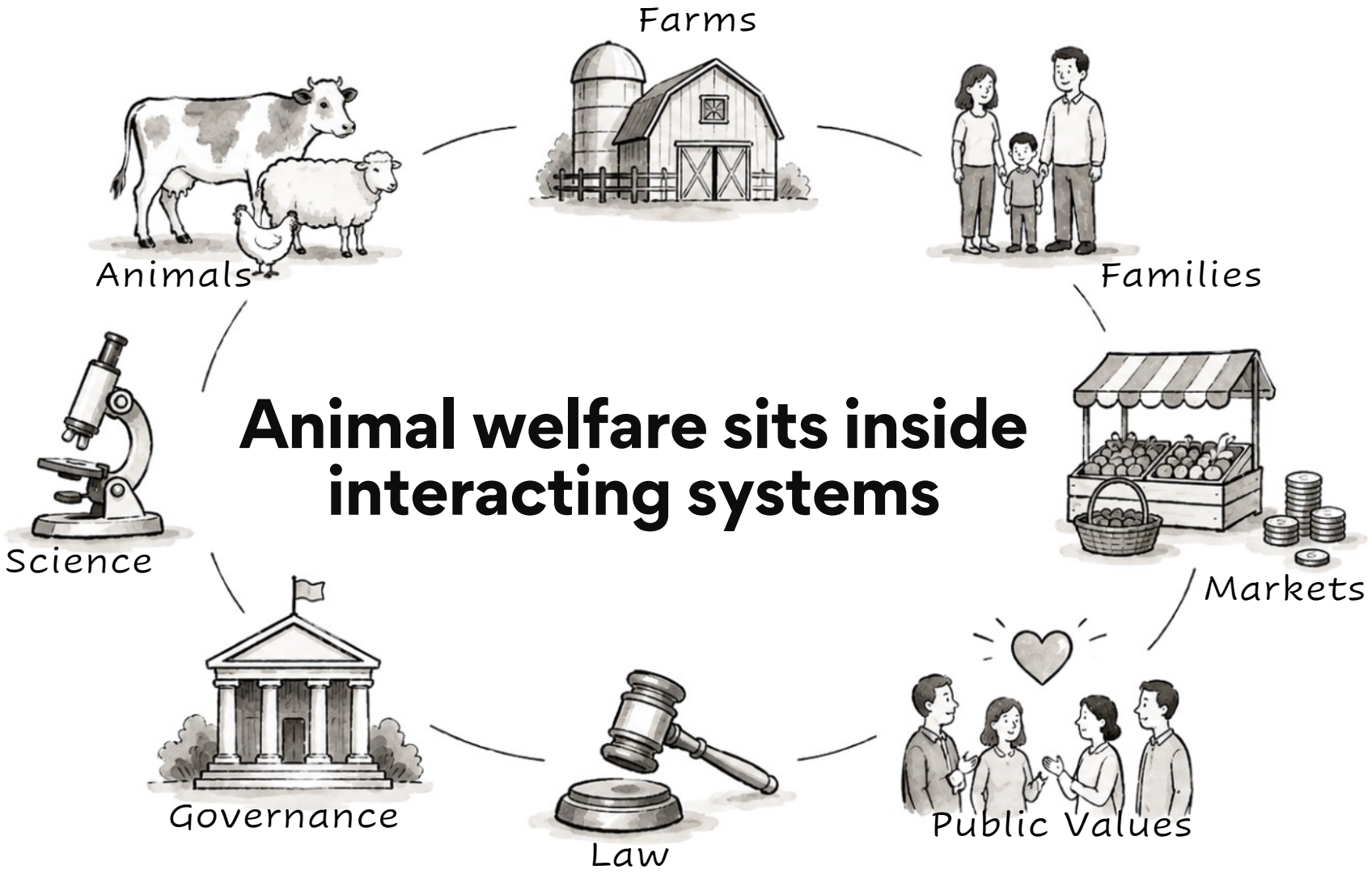


SYSTEMS THINKING

Why is change so hard?



Animal welfare sits inside interacting systems



What change may require

- New infrastructure
- More labour
- Different knowledge
- Financial risk
- Identity change

What resistance may mean

- Genuine capacity limit
- A trust problem
- A values disagreement
- A preference for the status quo

What complexity can hide

- Delay without direction
- Temporary compromises becoming permanent
- The least-ready setting pace

When change is difficult, how do we navigate situations where **complexity** is silently used to justify **not moving forward?**



THE MANY LAYERS OF CHANGE

Timelines and the people in the system



The pressures of change move on different clocks in different systems

GRADUAL	SLOW	FAST	SUDDEN

GRADUAL

Science

Evidence accumulates and uncertainty narrows

Herd-level risk factors for lameness in freestall farms in the northeastern United States and California

N. Chapinal *, A.K. Barrientos *, M.A.G. von Keyserlingk *, E. Galo †, D.M. Weary *

Prevalence of lameness and associated risk factors in Canadian Holstein-Friesian cows housed in freestall barns

L. Solano *, H.W. Barkema *, E.A. Pajor *, S. Mason *, S.J. LeBlanc †, J.C. Zaffino Heyerhoff †, C.G.R. Nash †, D.B. Haley †, E. Vasseur ‡, D. Pellerin §, J. Rushen #, A.M. de Passillé #, K. Orsel *

Research

Relationships between type of hoof lesion and behavioral signs of lameness in Holstein cows housed in Canadian tiestall facilities

M.T. Jewell, M. Cameron, S.L. McKenna, M.S. Cockram, J. Sanchez, G.P. Keefe

Chapinal et al., 2013. 96: 318-328 ; Solano et al., 2025. J. Dairy Sci. 98: 6978-6991:Jewell et al., 2021. 937-946

THE MANY LAYERS OF CHANGE: TIMELINES

SLOW

Infrastructure

Barns, equipment, debt, and skills turn over

Transitioning from crates to free farrowing: A roadmap to navigate key decisions

Emma M. Baxter [1*] Vivi A. Moustsen [2] Sébastien Goumon [3]
Gudrun Illmann [4,5] Sandra A. Edwards [6]

Comparison of Cattle Housing Systems Based on the Criterion of Damage to Barn Equipment and Construction Errors

by Marek Gaworski [1,*] and Michał Boćkowski [2]



Swine industry perspectives on the future of pig farming

Published online by Cambridge University Press: **13 February 2024**

Marina AG von Keyserlingk, Jillian Hendricks, Beth Ventura and Daniel M Weary Show author details

Article Figures Metrics

Baxter et al. 2022. Front. Vet. Sci. 9:998192 ; Gaworski et al., Animals (Basel). 2022 Sep 22;12(19):2530.: von Keyserlingk et al., 2024. Animal Welfare. 2024;33:e7

Focus groups exploring American consumer perspectives on contemporary poultry production reveal critical insights to educate sustainable practices for producers

Grace Dewi [1] · Chery Smith [2] · Wayne Martin [3]
Kumar Venkitanarayanan [4] · Anup Kollanoor Johny [1*]

Public attitude toward and perceptions of dairy cattle welfare in cow-calf management systems differing in type of social and maternal contact

L.V. Sirovica [1] · C. Ritter [1,2] · J. Hendricks [1] · D.M. Weary [1] · S. Gulati [3] · M.A.G. von Keyserlingk [1]

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"Dear Dairy, It's Not Me, It's You": Australian Public Attitudes to Dairy Expressed Through Love and Breakup Letters



Sarah E. Bolton, Bianca Vandresen & Marina A. G. von Keyserlingk

FAST

Public Concern

An investigation story, or generational shift can change expectations

Dewi et al., Front. Sustain. Food Syst. 8:1416167; Sirovica et al. 2022. J. Dairy Sci. 105:3248-3268; Bolton et al., 2024. Food ethics 9, 18

Denmark has replaced its traditional agriculture ministry with a ministry for nature and animal welfare



Animal welfare

How campaigners beat industrial farming in Denmark's 'pig election'

Mette Frederiksen's new government promises overhaul for people - and animals - in home of ultra-intensive farming

Jon Henley *Europe correspondent*

Sat 6 Jun 2026 05.00 BST

SUDDEN

Politics and Markets

A court decision, buyer rule, or import condition can create a deadline for change

Different interest holders have different views of the same pressures

Researchers



- Expansion of university researchers has not kept up with decreases at AAFC and as a result, the capacity is widely perceived to be inadequate
- There are existing challenges associated to the transfer of knowledge and expertise from researchers to users

https://animalhealthcanada.ca/pdfs/animal-welfare-research-capacity/NFAHW%20Council_Recommendation_Animal%20Welfare%20Research%20Capacity_2014.pdf



How do researchers find meaning in this slow moving career?

"Nothing happens. I think industry is expecting a miracle. How many times can we study pain in castration? We know its painful. We know how to fix it. But they want us to keep trying to find an easy answer that just does not exist.
I am exhausted."



Morabito et al., in prep

"[Farmers] are all saying, 'You have to come on the farm more often' but [the institutions] want me to publish publish publish. I can't be a researcher and a middle-man if only one of those gives me job security."



Morabito et al., in prep

Researchers are struggling



Stay involved

Evidence guides change; decisions retain scientific credibility

Withdraw

Change proceeds with less scientific input

Change is hard for farmers as they wear many hats

Farmer perspectives on introducing social housing for calves...



Koralesky et al. 2025. J. Dairy Sci. 108:12438-12449

A farmer's view on things...pragmatic but most really do care!



"For the most part, it is a business, you do have to make a living, so you can't be too soft, but on the other hand, it's incorrect to imagine that a farmer has no emotional attachment to his animals, because they're living beings, they live and breathe with you, you work with them all day long."

Schuppli et al., 2024. Animal Welfare 32, e38, 1–15



The tension



- Researchers can recommend options for credible change
- Are the animal industries empowered to respond?
- To what extent should those in the industry least ready dictate timelines?

WHAT IS CHANGING?

Canada is changing

- Increased calls for more comprehensive animal-welfare legislation
- Restrictions on specific housing systems and practices
- Independent oversight and public reporting
- Recognition of animal sentience
- Animal welfare entering food trade strategy

A mirror clause makes the market's standards travel

1

Raise the domestic standard

E.g. animal housing

2

Reflect it in import conditions

E.g. requiring certification

3

Tie compliance to market access

E.g. animal housing

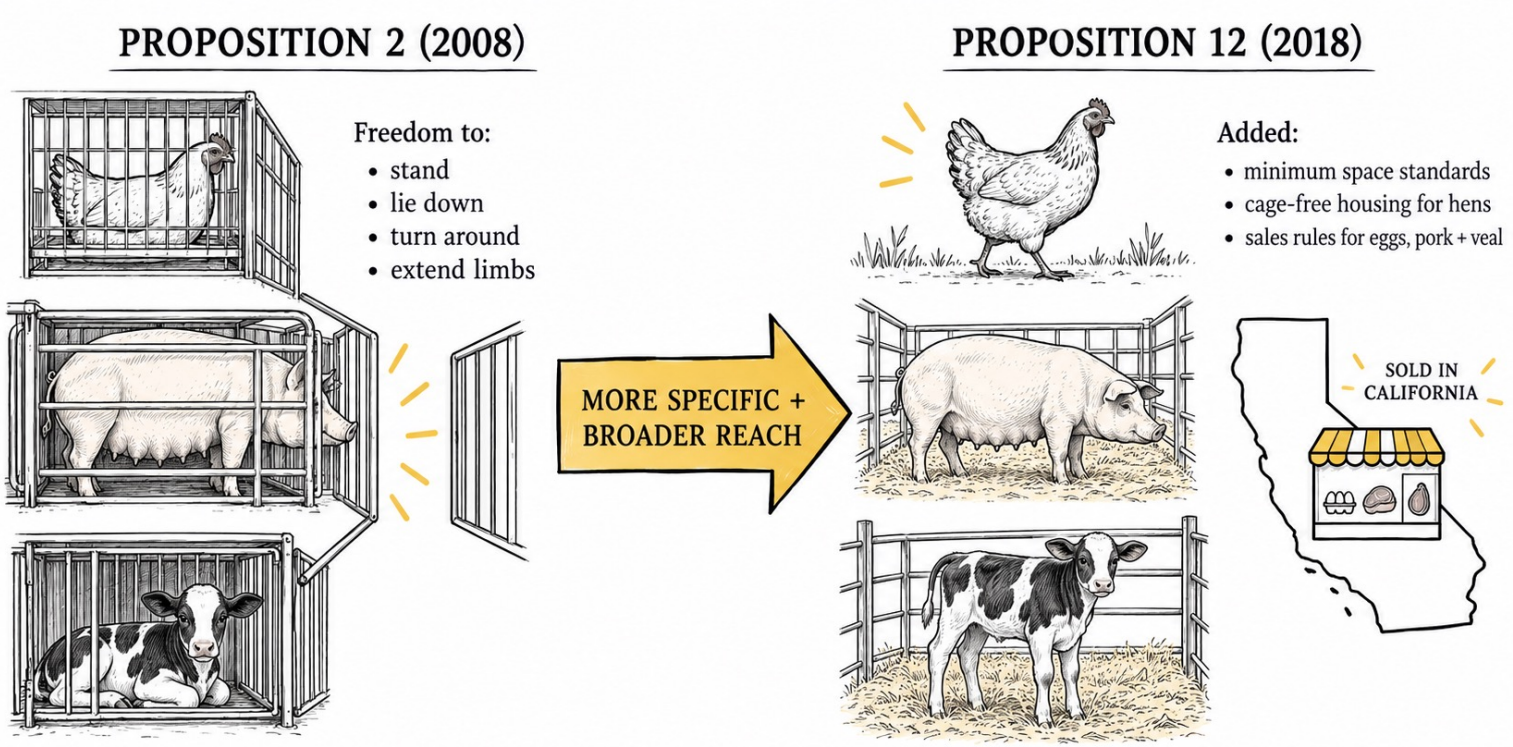
The EU already mirrors slaughter protections

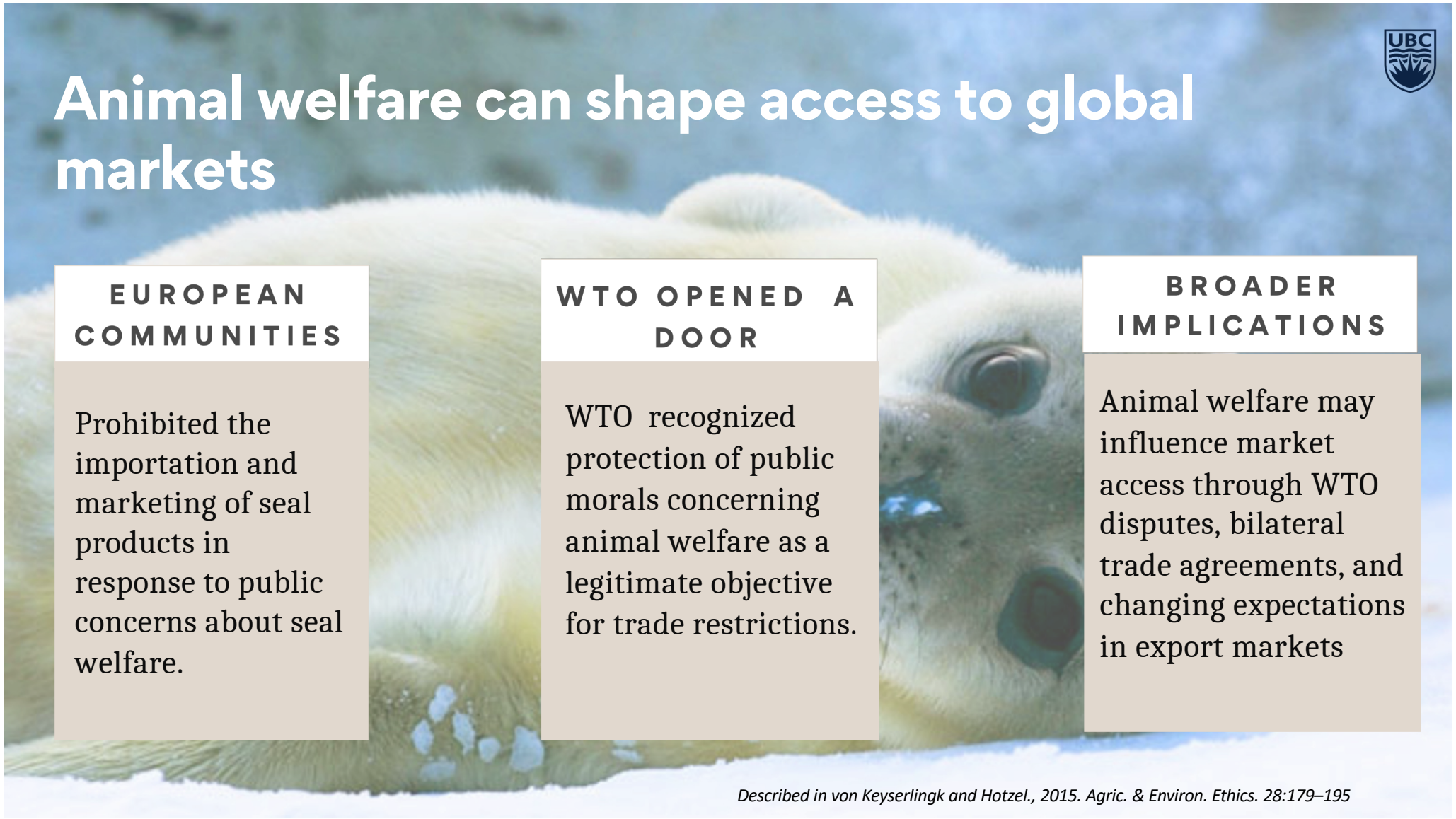
Imported meat must carry an attestation that slaughter requirements were "at least equivalent" to EU rules.

Regulation (EC) No 1099/2009, Article 12



California demonstrates that an individual state market can reshape production





Animal welfare can shape access to global markets

EUROPEAN COMMUNITIES

Prohibited the importation and marketing of seal products in response to public concerns about seal welfare.

WTO OPENED A DOOR

WTO recognized protection of public morals concerning animal welfare as a legitimate objective for trade restrictions.

BROADER IMPLICATIONS

Animal welfare may influence market access through WTO disputes, bilateral trade agreements, and changing expectations in export markets

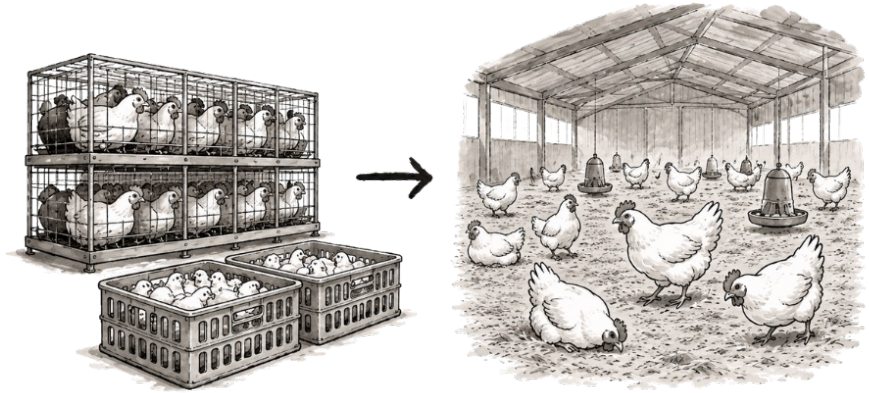
Described in von Keyserlingk and Hotzel., 2015. Agric. & Environ. Ethics. 28:179–195

EU–Canada trade makes alignment strategically relevant

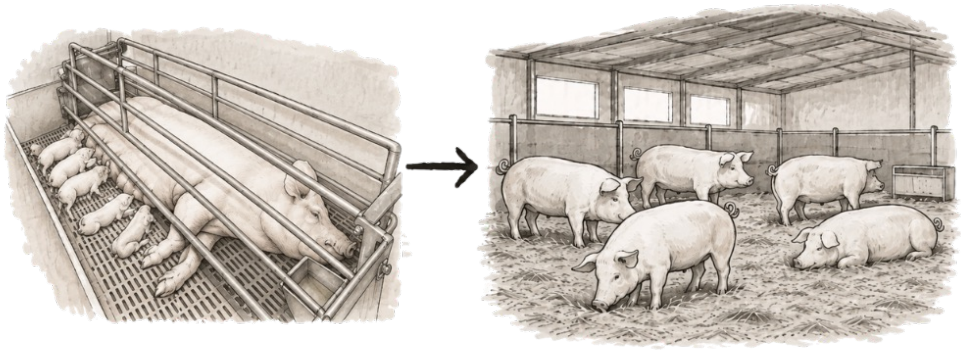
75%+

growth in two-way goods trade since the Canada-European Union Comprehensive Economic and Trade Agreement (CETA) provisional application began in 2017

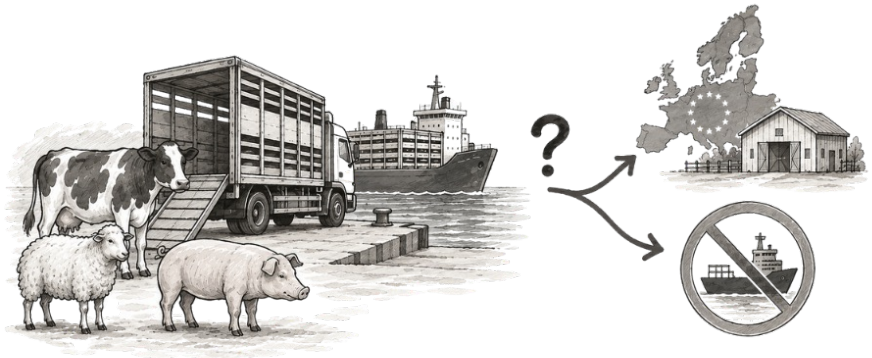
EU Livestock Strategy – Discussion in July 2026



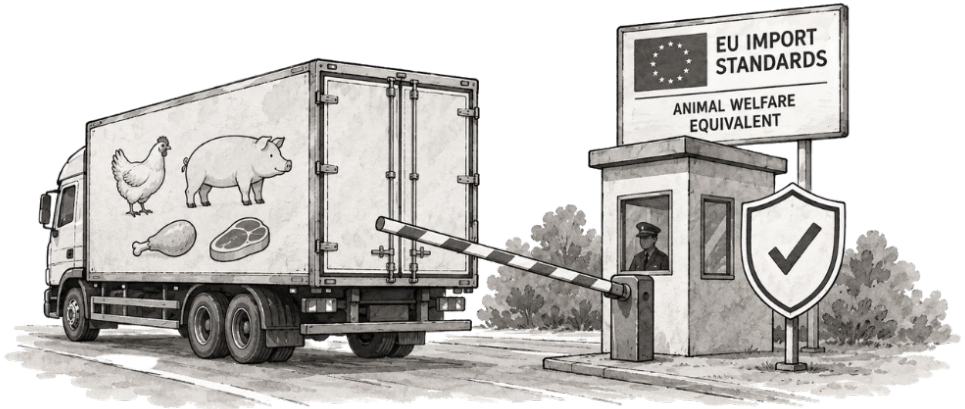
Toward cage-free systems for broilers and laying hens



Transition from crates to pens

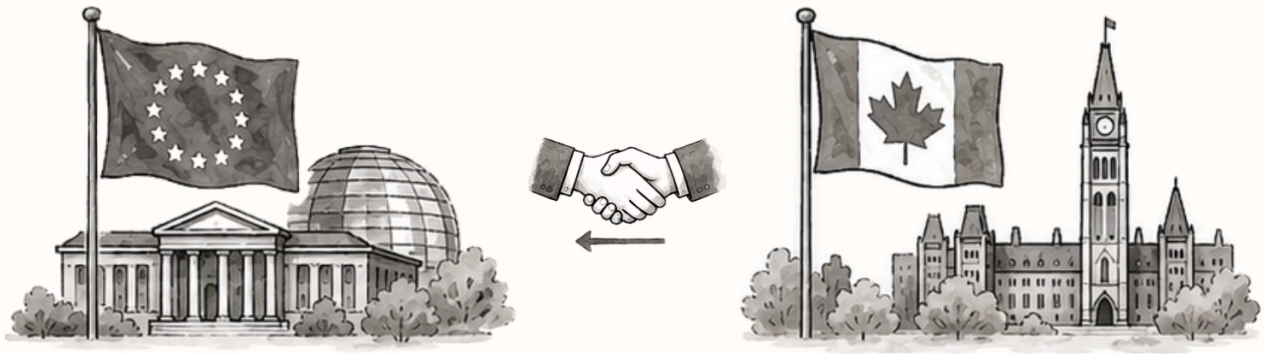


Considering alternatives to live export to third country



Imports held to EU welfare standards

EU–Canada trade makes alignment strategically relevant



2026 Direction

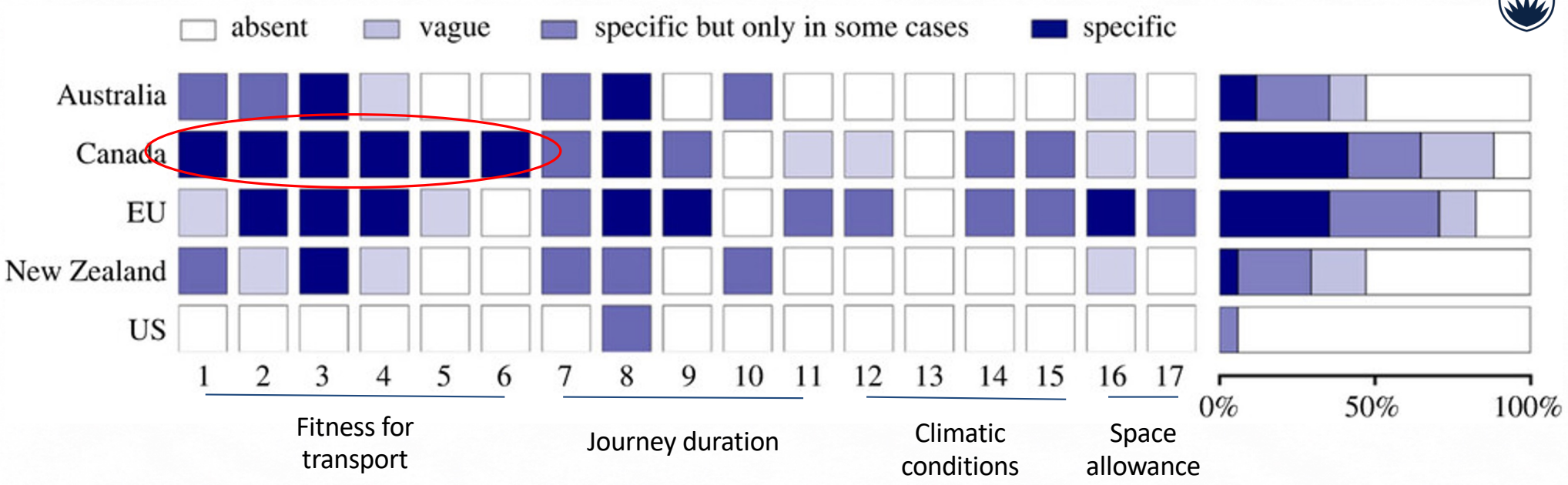
- Deepen EU-Canada economic relations
- Reduce Agri-trade barriers
- Explore more regulatory alignment
- Prevent new trade impediments

If Canada waits for external pressure to make change unavoidable, it may lose control over the pace, design, and supports for that change.

DOMESTIC PERMISSIBILITY MAY NOT GUARANTEE INTERNATIONAL ACCEPTABILITY.

LOOKING HONESTLY AT CANADA





How do Canada's animal transportation laws measure up against other countries?



Duval et al., 2024. R. Soc. Open Sci.11: 231072

Dairy Code of Practice: An example of change

- By April 1, 2027, cows cannot remain continuously tethered throughout the full production cycle

- By April 1, 2031, healthy and compatible calves must be pair- or group-housed by four weeks of age



https://www.nfacc.ca/pdfs/codes/dairy/DairyCattle_23_FINAL.pdf

NFACC solves a real Canadian coordination pr

C in fragmented provincial

Brings resea fare
groups, gover

Connects standards to production
increase understanding and implem

Its strengths are precisely why reform debates matter: The system is too important to assess only defensively

The same design creates vulnerabilities

- Industry influence and questions about independence
- Variable legal status and direct enforceability
- Long development and revision cycles
- Limited public understanding of decision-making
- Tension between evidence and what is considered achievable
- Dependence on negotiated compromise

Described in Kuo, Christine, et al. *Animal Welfare* 34 (2025): e22.

The 2026 Animal Justice report is a strategic signal

EXTERNAL INTERPRETATION

- Industry-dominated
- Weakly enforceable
- Insufficiently transparent
- Lacking independent accountability



The 2026 Animal Justice report is a strategic signal

WHAT CAN WE DO WITH THIS?

- Dismissing the report entirely would still miss what it reveals: how external actors interpret Canadian governance

- Which criticisms seem unfounded verses which must be addressed?



Systems thinking requires anticipating consequences and asking who bears them. Make the animal's costs visible alongside financial and human costs.

TRADE-OFFS TELL US CHANGE MUST BE DESIGNED CAREFULLY.

THEY DO NOT TELL US CHANGE SHOULD NOT HAPPEN.

Go fast or go slow.....

Timeline that enables change

- Sense of urgency
- Clear destination
- Interim milestones
- Assigned responsibility
- Financial + technical support
- Measured public progress

Timeline that delays change

- Same issue reconsidered
- Universal readiness required
- No interim targets
- Decision deferred
- Temporary compromise becomes permanent

CHOOSING HOW CHANGE HAPPENS

AND FINDING THE COURAGE TO MAKE IT



Canada can...

Defend

- Explain why current practices are reasonable.
- Preserve the existing system.
- Risk others defining change.

React

- Change when regulated
- Change when controversy or crisis requires it
- Face shorter, costlier transitions

Lead

- Identify vulnerabilities early
- Set a direction
- Co-design transition pathways
- Strengthen governance before legitimacy is lost

Will Canadian animal agriculture shape change or have it shaped for them?

...answering this question takes courage!



To secure its future, Canadian agriculture must lead…

- ✓ The animal industries must **intentionally** and **proactively** engage in these conversations
- ✓ We need to keep researchers **engaged** and **solve the problem of extension**
- ✓ Address credible criticism **before trust is lost**

Thank you!

The thoughtful member of the public does not expect animal agriculture to change overnight

but they do expect the industries to get better every day.

Dr Emily Morabito (UBC)
Dr Sky Sheng (UBC)
Dr Daniel M. Weary (UBC)
Dr Katy Proudfoot (UPEI)
Dr Sarah Bolton (Murdoch University, Australia)
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