IRELAND: Addressing challenges for transport of unweaned animals

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5th meeting of WOAH regional network of National Contact Points on long-distance transportation in Europe

11 - 13 March 2025, Dublin, Ireland

World Organisation for Animal Health
Founded as OIE

Cattle: integral to the Irish economy since ancient times

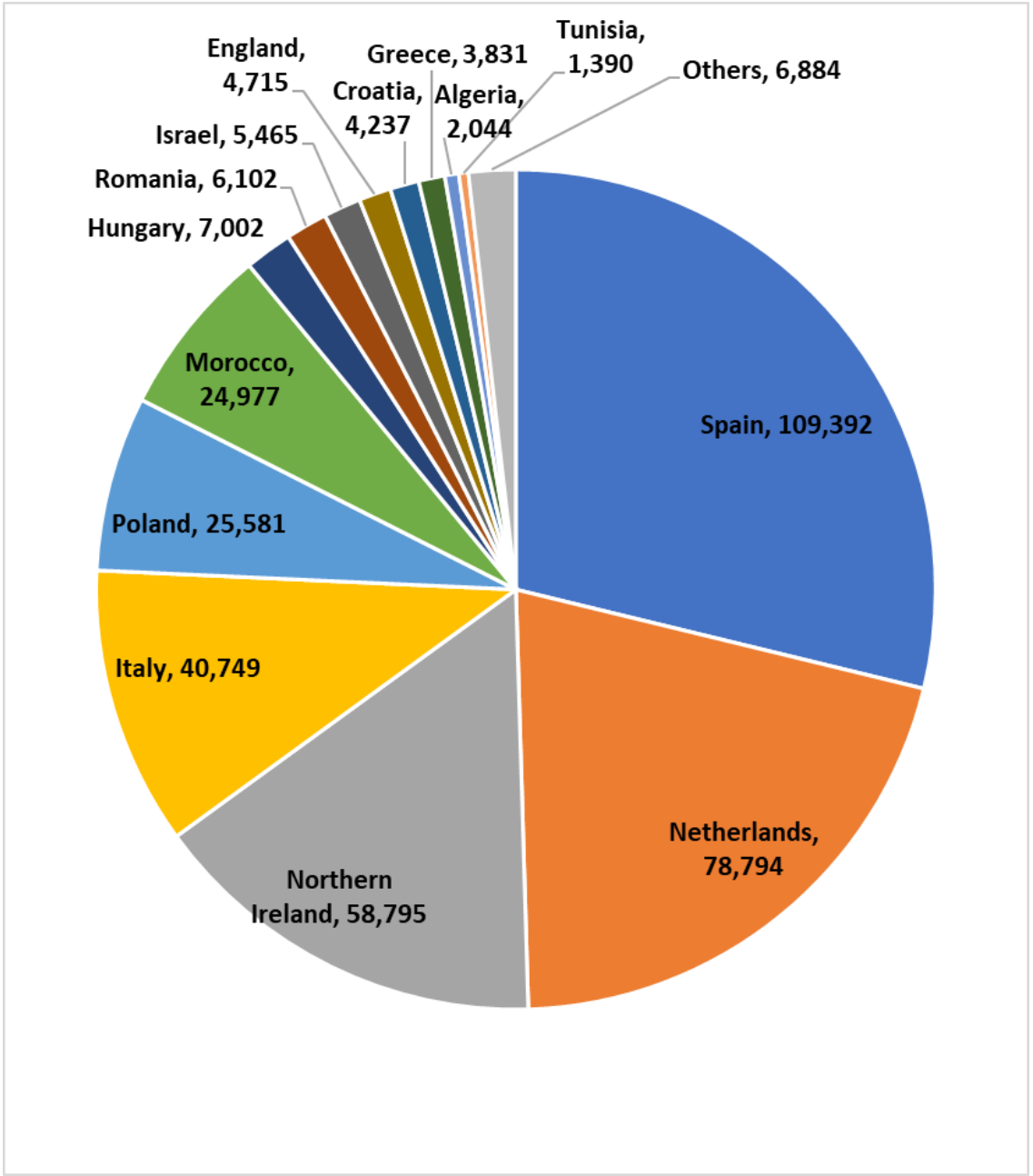
- https://en.wikipedia.org/wiki/ Táin_Bó_Cúailnge

Cattle traded out of Ireland 2020 – 2024

	Number of Cattle				
Country	**2024**	**2023**	**2022**	**2021**	**2020**
Spain	109,392	75,043	73,239	73,537	81,278
Netherlands	78,794	107,284	97,779	49,180	48,865
Northern Ireland	58,795	54,410	48,797	72,784	64,222
Italy	40,749	36,463	29,845	29,754	21,836
Poland	25,581	16,987	3,973	1,544	3,132
Morocco	24,977	30	111	0	61
Hungary	7,002	4,175	1,463	1,862	205
Romania	6,102	3,532	76	100	245
Israel	5,465	6,840	0	0	0
England	4,715	2,272	2,566	2,939	3,560
Croatia	4,237	433	62	0	0
Greece	3,831	2,229	2,653	2,245	2,651
Algeria	2,044	380	0	0	1,088
Tunisia	1,390	235	0	0	164
Others	6,884	12,416	25,791	13,611	38,358
Totals	**379,958**	**322,729**	**286,355**	**247,556**	**265,665**

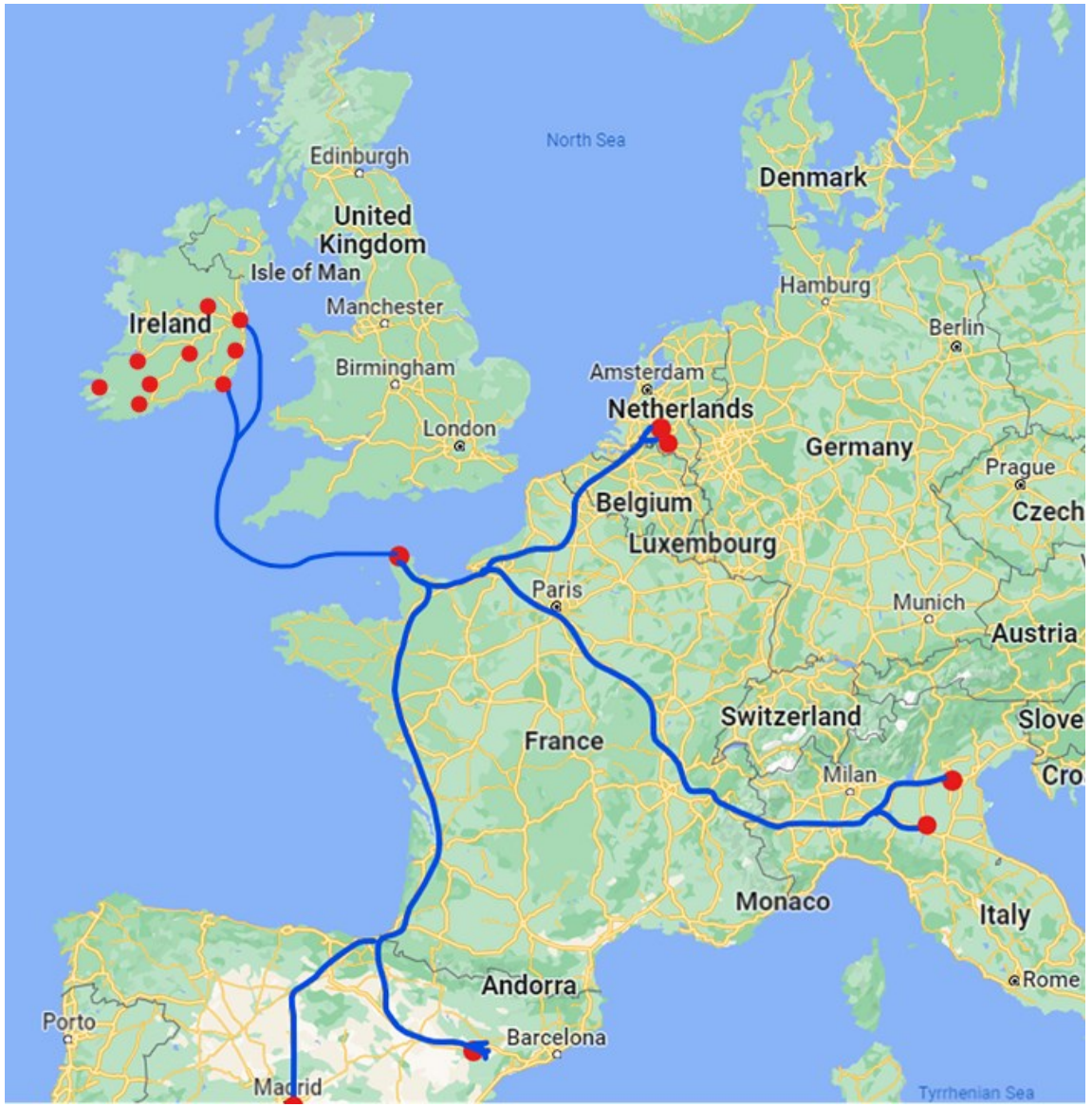
Cattle traded out of Ireland in 2024

- Most trade consists of calves traded to EU countries, in truck & ferry.
- However, although lower in number, many stronger and more valuable animals are exported in dedicated livestock vessels to countries such as:
  - Tunisia,
  - Morocco
  - Algeria,
  - Libya,
  - Lebanon,
  - others



Cattle trade to European Union countries

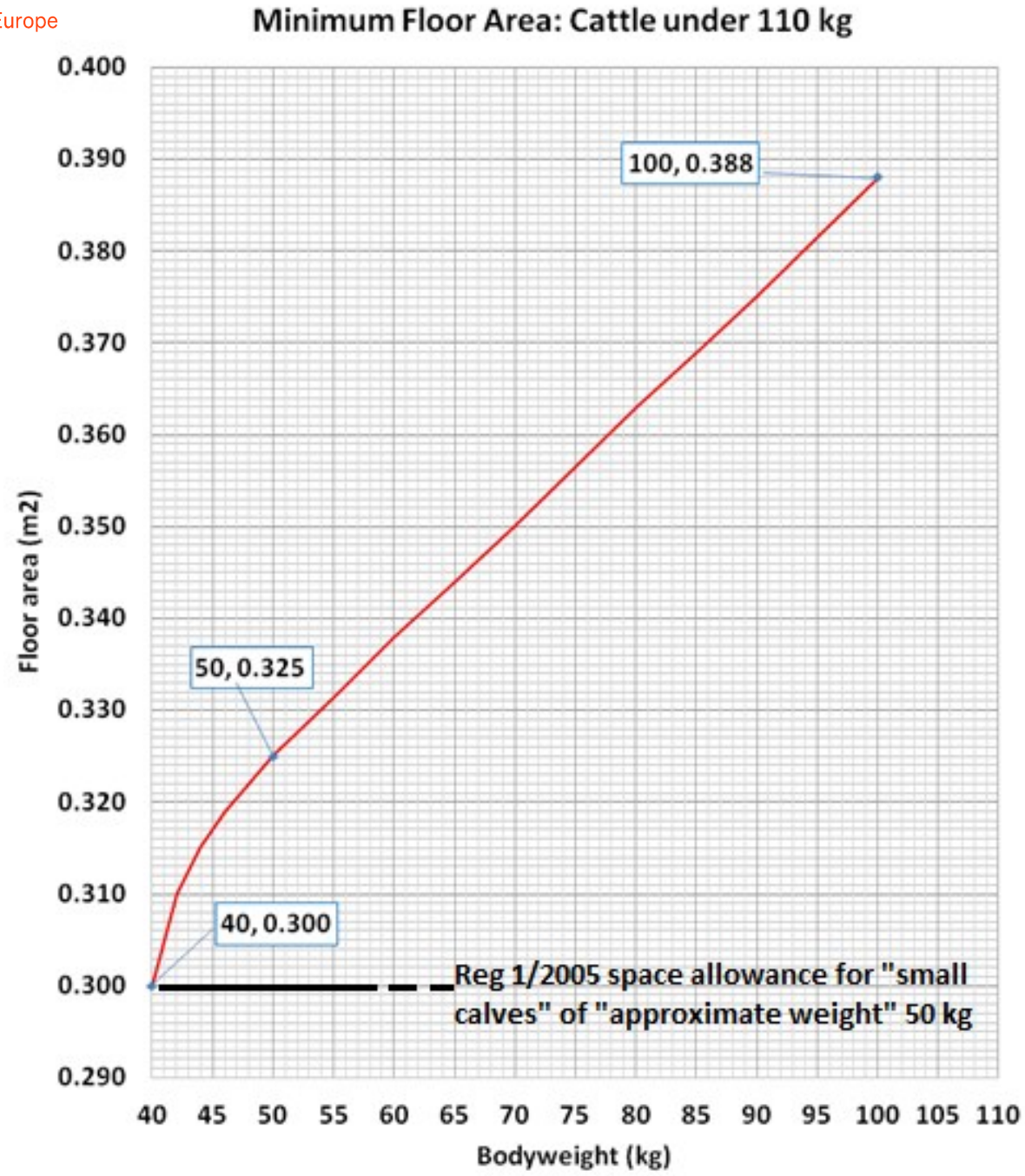
- Large numbers of bovine animals traded to Netherlands, Spain, Italy – most are unweaned or young dairy-breed calves.
- Travel by truck, on ferry
- Under Regulation (EC) No 1/2005, unweaned calves may be transported from 14 days – vulnerable animals, long journey. Public concerns.
- Annex I, Chapter V (1.7)(b) – following a long ferry journey, unloaded and rested 12 hours at Control Post in immediate vicinity of port. Fed in CP.



Measures to improve calf welfare during transport

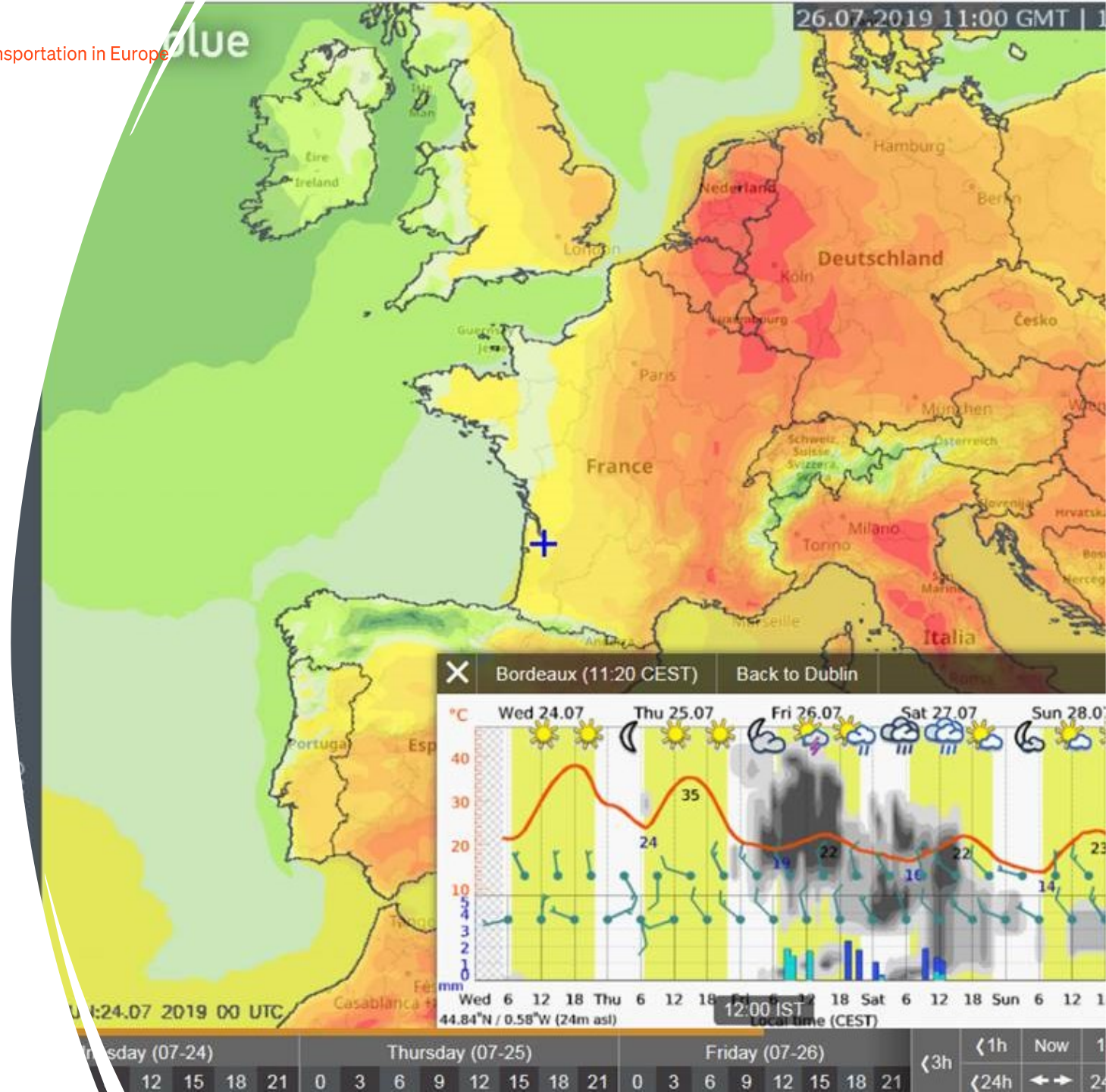
2019 and 2020 – Introduction of policy measures to provide extra protection:

- Driver certificate of competence for livestock now lasts 3 years (was formerly 10 years). Full training required to renew.
- Extra space in vehicles for calves
  - 50kg: min. 0.325m^2 as opposed to min. 0.3m^2 laid down in Reg 1/2005;
  - 55kg: min. 0.332m^2 or 11% more than laid down in Reg 1/2005)



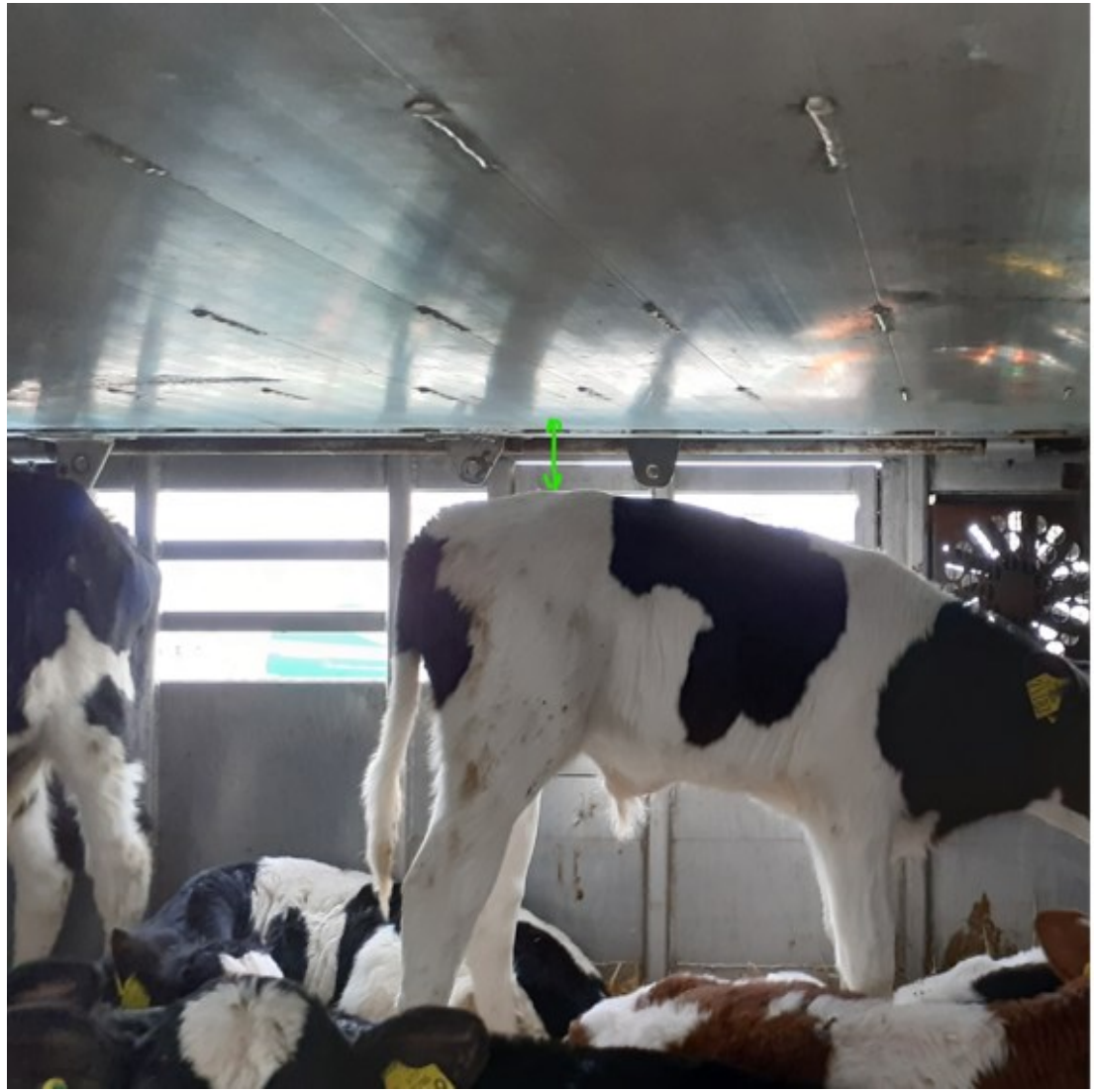
Measures to improve calf welfare during transport

- Maximum external temperature of 30°C at time of transport – weather forecast en route to be checked by transporter and VI.
- HQ started to issue general weather alerts to industry and regional offices.



Measures to improve calf welfare during transport

- Minimum overhead height set – for calves, a minimum of 15cms above the withers or tailhead (whichever is the highest) of the tallest calf on that deck.
- All use of sticks on calves banned.
- No-warning veterinary accompaniment of calves to Cherbourg and Control Posts from time to time.
- Enforcement of return of JL Section 4 and sat nav – commencement of sanctions for non-return.
- Teagasc commenced the MOOVE project researching calf welfare during transport and how it may be improved (see later slides).



Irish Delegation visited Berghuis, Germany, April 2023:

Calves drinking milk replacer in purpose built lorry with **integrated** feeding system (Finkl/Berghuis)

Calves drinking milk replacer in normal lorry with **retro-fitted** feeding system

Teagasc (Ireland's semi-state agricultural research body) launched the MOOVE project to investigate calf welfare during the journey from Ireland, with funding & support from the Department of Agriculture, Food and the Marine

High priority for Government of Ireland

Moove Project

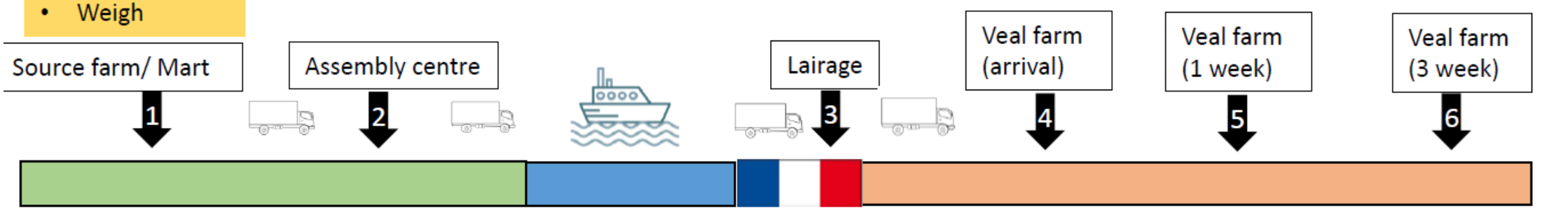
- Unweaned calves are transported via road and ferry to continental Europe annually
- Growing concern for calf welfare
- Need to: 1) Establish health and welfare status of transported calves
  2) Investigate strategies to improve welfare during transport
- High priority research area for Teagasc – important outlet for non-replacement calves until alternatives in place
- Huge work done, significant resources invested in MOOVE to date

Teagasc scientists assess health and welfare indicators before, during and after journey.

Methods

Energy balance: glucose, BHB, NEFA
Hydration: Urea, Na, K
Muscle damage: CK, lactate
Stress: Cortisol

- Blood sample
- Health score
- Weigh



doi.org/10.3389/fvets.2023.1238734

frontiers | Frontiers in Veterinary Science

TYPE Original Research
PUBLISHED 26 September 2023
DOI 10.3389/fvets.2023.1238734

OPEN ACCESS

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RECEIVED 12 June 2023
ACCEPTED 22 August 2023
PUBLISHED 26 September 2023

CITATION
van Dijk LL, Siegmann S, Field NL, Sugrue K, van Reenen CG, Bokkers EAM, Sayers G and Conneely M (2023) Effect of source and journey on physiological variables in calves transported by road and ferry between Ireland and the Netherlands. *Front. Vet. Sci.* 10:1238734. doi: 10.3389/fvets.2023.1238734

Effect of source and journey on physiological variables in calves transported by road and ferry between Ireland and the Netherlands

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This study aimed to establish baseline variables for calves transported by road and ferry from Ireland to the Netherlands and to investigate the effect of journey [two comparable journeys in April (J1) and May (J2) 2022] and source [source farm or mart (SF/MA)] on these variables. A total of 66 calves from the SF/MA were transported from Ireland to commercial veal farms in the Netherlands. Blood samples were collected at the SF/MA, assembly center (Ireland), lairage (France), and on arrival on the veal farm (Netherlands). They were analyzed for indicator variables related to energy balance, hydration/electrolytes, physical/muscular stress, immunity, and inflammation [glucose, beta-hydroxybutyrate (BHB), non-esterified fatty acids (NEFA), potassium, sodium, magnesium, chloride, urea, haematocrit, total protein, creatine kinase, L-lactate, cortisol, white blood cell, neutrophil, lymphocyte and monocyte counts, serum amyloid-A, and haptoglobin]. Health variables eye and nose discharge, skin tent (a measure of dehydration), and navel inflammation were scored by a trained observer, and calves were weighed at every blood-sampling time point. All blood variables

DAFM also funds the WELCALF project run by Teagasc

WELCALF

On-lorry feeding systems for long distance transport of calves

RSF 2023RP897
DAFM funded

An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

Teagasc
Agriculture and Food Development Authority

Objectives

- Develop automated system to feed calves in a lorry
  - Design system to freshly mixing feed and allocating calves a defined volume of milk while undergoing long distance transport
  - Individually allocation
  - Hygiene
  - Efficacy

Design an on-board automated milk feeding system

WELCALF

- Previous truck feeding study
  - Mixing
  - Manual feeding
  - H&S
  - Ferry companies
- Challenge designing a automated system, which can feed but without intervention where calves can be allocated measured quantities

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Department of Agriculture, Food and the Marine

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Criteria for on-board feeding

- Must feed calves automatically
- Each pen is fed individually
- One station per pen
- Can be programmed to feed specific volumes of milk to each calf and access time to the milk can be controlled (e.g. 2 litres every 9 hours)
- Individual feeding to prevent calves overfeeding
- Not interfere with decks being raised or lowered
- Automatic system to alert operator/truck driver of issues e.g. feeder not working
- User friendly and easy to calibrate
- Robust

Progress to date....

- Actively engaging with company specialising in manufacture of automatic milk feeders
- Working with company servicing and selling truck trailers transporting calves from Ireland
- Currently at prototype design phase

Outcomes for Irish calves traded to Netherlands

- M.H. Bokma-Bakker, J.W. van Riel, C.C. de Lauwere, A.F.G. Antonis en M. Kluivers-Poodt, 2017.*Onderzoek naar kritische succesfactoren voor een laag antibioticumgebruik bij vleeskalveren.* Wageningen Livestock Research, Rapport 1068A. Available at https://edepot.wur.nl/427965

  - Research into critical success factors for low antibiotic use in veal calves. "Flocks with predominantly Irish calves showed a more than 30% lower use of antibiotics after weight correction than comparable flocks from other origins" (Page 8)

- European Commission, Directorate-General for Health and Food Safety, *Study on shifting from transport of unweaned male dairy calves over long distance to local rearing and fattening – Final report.* Publications Office of the European Union, 2022. Available at https://data.europa.eu/doi/10.2875/072915

  - Mortality of calves from Ireland in Dutch veal systems compared favourably with mortality of calves from other countries (see table on next slide)

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  - From Table 6 (Page 49). Cumulative mortality rates on Dutch veal calf farms on day 1 and 2, and up to day 7, 14 and 56 of the fattening period by MS of origin in the period 2017-2020 (source: data SBK)

MS of origin	Average number calves received per /year	...	Up to day 14	Up to day 56
Belgium	22 434		0.74%	1.84%
Czech Republic	17 713		0.31%	1.08%
Germany	545 228		0.64%	1.75%
Demark	31 423		0.28%	1.23%
Estonia	21 649		0.49%	1.35%
Ireland	57 935	...	0.42%	1.12%
Italy	103		0.24%	0.97%
Lithuania	7 098		0.82%	2.19%
Luxembourg	18 813		0.50%	1.10%
Latvia	22 608		0.78%	1.97%
Netherlands	920 533		0.43%	1.39%
Poland	610		1.48%	3.81%
Romania	66		0.38%	5.30%
Slovakia	2 109		0.36%	1.34%
Total	**1 668 320**	...	**0.51%**	**1.50%**

Thanks for your attention

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