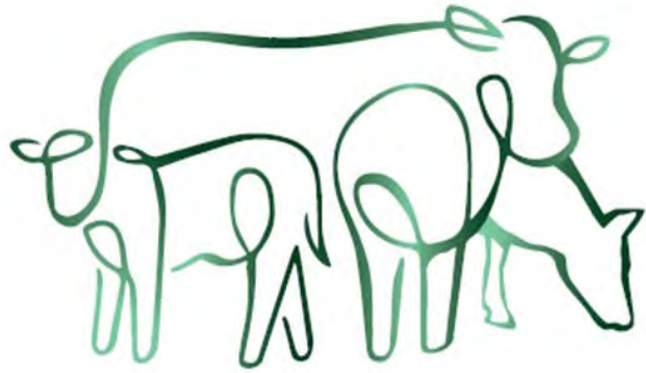




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CARE4 DAIRY

Pilot project
on the welfare of dairy cattle, including measures
to protect unweaned dairy calves
and end-of-career animals
SANTE/2021/OP/0005

EU Platform on Animal Welfare, Friday, 16 June 2023

Silvia D'Albenzio, Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise
"G. Caporale"

Birgitta Staaf Larsson, Swedish Centre for Animal Welfare, Swedish University of
Agricultural Sciences





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- Targeting **dairy cattle** farms
- Aiming to align with recent **scientific knowledge** and **facilitate the implementation** of the future revision of EU legislation

Advisory Board



Background information

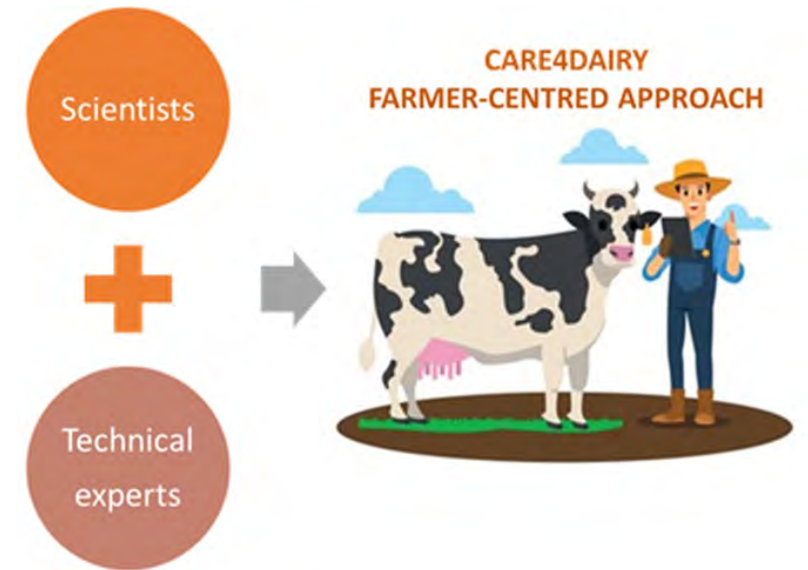


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Scope of the CARE4DAIRY Project is to establish best practices regarding the welfare of **dairy heifers, cows and calves**, including the treatment of **end-of-career dairy cows**, and ensure a wide dissemination of the information collected in the best practices through the development of communication materials and the organisation of events.

The best practices will cover the whole cycle of production of a dairy farm, from the birth or introduction of animals, until they leave the farm, and the first seven days of life after unweaned dairy calves enter a fattening farm. The best practices should consider the variety of farms in terms of sizes, designs, regional climates and economic models that exist in Europe.

Activities related to the preparation for transport or the possible killing of animals on farm are even covered.



Excluded from the scope:

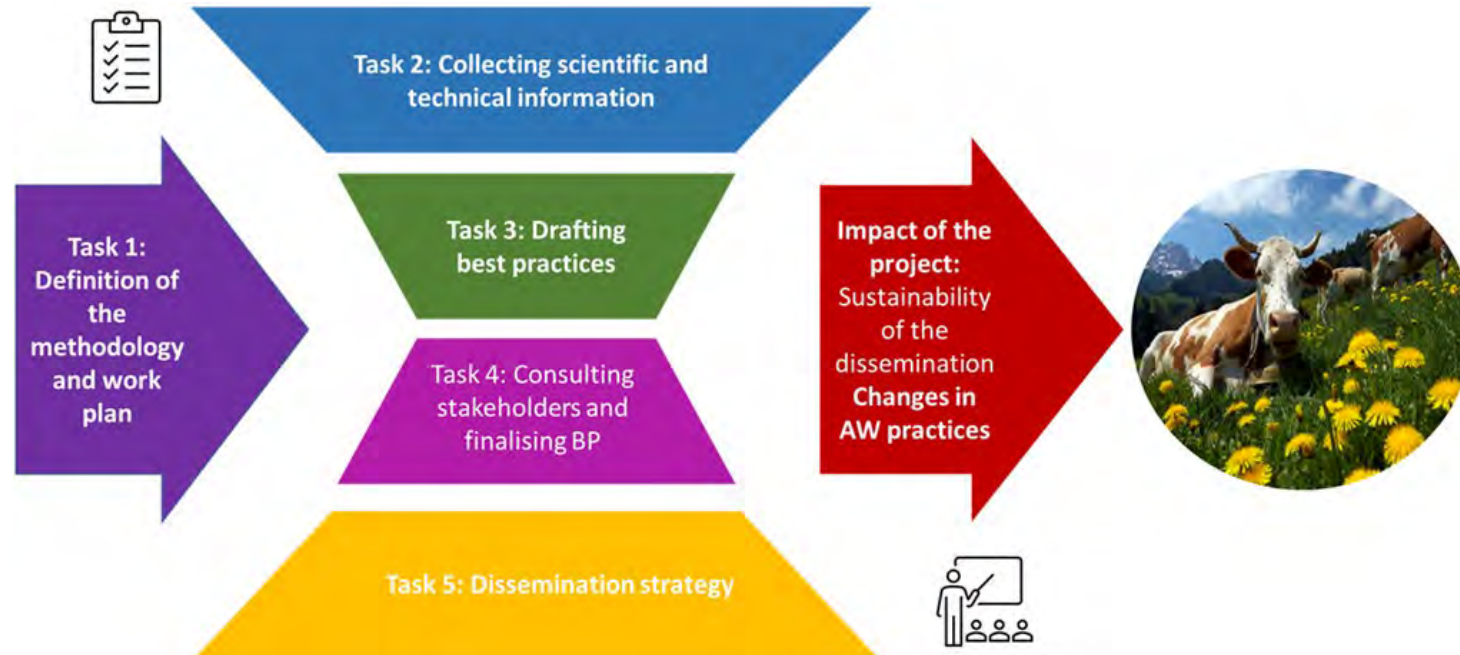
- Transport
- Slaughter
- Fattening (of males)

→ **Only life stages in the dairy farm**

The CARE4DAIRY scope and approach



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Project architecture

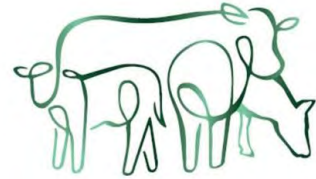


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- ❑ **Review of the scientific literature**
- ❑ **Consultation of the Advisory Board**
 - Ranking of issues from List 1
- ❑ **On-line survey** 157 scientists or stakeholders, 59 respondents
 - Major welfare issues - List 2
(Issues cited by > 10 % respondents)

Collection of technical material

Over **60 initiatives** identified,
30 analysed in depth



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**Final list of priority issues:
~20 issues organised into
housing, feeding, health, behaviour**

Task 2: Information collection and analysis

Task 3: Drafting best practices



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1. Drafting best practice guidelines
2. Internal evaluation of best practice guidelines
3. First testing with end-users
4. Output – draft best practice



Best practice guidelines for

1. Dairy calves
2. Heifers
3. Dairy cows
4. Cull cows



Photo: Birgitta Staaf Larsson

Prepared based on the
output of Task 2



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	Calves	Heifers	Cows	End-of-career cows
1. Heifers & Cows - Managing the Dry Period				
2. Calving care – calf				
3. Calving care – cow				
4. Calf health and welfare				
5. Calf nutrition (watering and feeding)				
6. Calf environment				
7. Calf behaviour and human-animal interactions				
8. Pain management around castration and disbudding				
9. Heifer Reproductive Health				
10. Heifer nutrition and comfort				
11. Heifer behaviour and human-animal interaction				
12. Cow Reproductive Health				
13. Heifer & cow infectious and parasitic diseases				
14. a) Heifer & cow nutritional and metabolic health				
14. b) Heifer & cow nutrition (feeding and watering)				
15. Heifer & cow locomotion				
16. Heifer & cow environment				
17. Heifer & cow behaviour and human-animal relationship				
18. Heifer & cow udder health				
19. End of life management				



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- **Positive focus** to attract farmers
- **Life Stages**
- **Why is this important?**
- **Good practices (minimum standards) and Best practices achieved through:**
Housing, Feeding, Health, Behaviour
- **Summary**
- **References**

Good Practices



Feeding



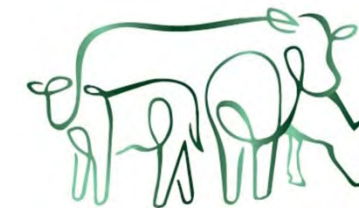
Environment



Behaviour



Health



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Best Practices



Feeding



Environment



Behaviour



Health

Task 3: drafting best practices



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- 72 identified issues grouped into 20 fact sheets
- Supported by photos/images



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Photos: Birgitta Staaf Larsson

Task 3: drafting best practices



Calves



2. Calving care – calf (calving and first days)
3. Calving care – cow and calving area
4. Calf health and welfare
5. Calf nutrition (watering and feeding)
6. Calf comfort and housing/environment
7. Calf behaviour and human-animal relationship
8. Pain management around castration and disbudding
19. End of life management & Fitness for transport





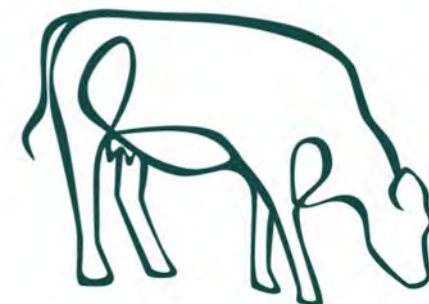
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Heifers



Photo: Birgitta Staaf Larsson

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1. (Dry-off and) preparation to calving
3. Calving care – cow and calving area
9. Heifer Reproductive health
10. Heifer nutrition and comfort
11. Heifer and human-animal interaction
13. Heifer & cow infectious and parasitic diseases
14. a) Heifer & Cow nutritional and metabolic health
14. b) Heifer & Cow nutrition (feeding and watering)
15. Heifer & Cow locomotion
16. Heifer & Cow environment
17. Heifer & Cow behaviour and human-animal relationship
18. Heifer & cow udder health

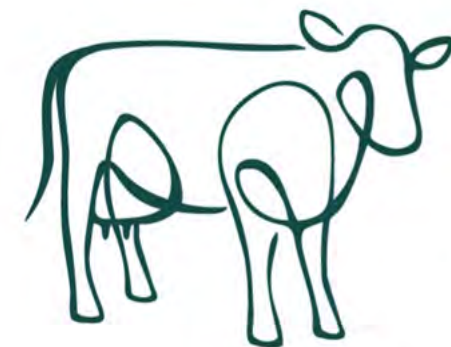
Task 3: drafting best practices



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Cows



1. Dry-off and preparation to calving
3. Calving care – cow and calving area
12. Cow Reproductive health
13. Heifer & cow infectious and parasitic diseases
14. a) Heifer & Cow nutritional and metabolic health
14. b) Heifer & Cow nutrition (feeding and watering)
15. Heifer & Cow locomotion
16. Heifer & Cow environment
17. Heifer & Cow behaviour and human-animal relationship
18. Heifer & cow udder health



Photo: Birgitta Staaf Larsson

Task 3: drafting best practices

End of career cows



1. Dry-off (and preparation to calving)
13. Heifer & cow infectious and parasitic diseases
14. a) Heifer & Cow nutritional and metabolic health
14. b) Heifer & Cow nutrition (feeding and watering)
15. Heifer & Cow locomotion
16. Heifer & Cow environment
17. Heifer & Cow behaviour and human-animal relationship
18. Heifer & cow udder health
19. End of life management & Fitness for transport



Photo: Birgitta Staaf Larsson



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What we have discussed

- Tethered animals – tie stalls
- Legislation – how detailed?
- Pain management
- Cow – Heifers
- Male calves

All factsheets have been checked by several experts and English proofread



Photo: Birgitta Staaf Larsson

Task 3: drafting best practices



Factsheets



CARE4DAIRY

Calf Behaviour and Human-Animal Interactions

Best Practice

Best practice farms have confident calves who express a range of positive natural behaviours by providing an enriched indoor & outdoor environment with kind, animal-centred human-animal interactions.

Life Stages: Calves

Why is this important?

Environmental, nutritional and social enrichments promote cognitive and behavioural development in calves. This supports stress resilience and facilitates long-term adaptation to changing farm conditions, transport, and to life in a herd. Attentive care and positive interactions with humans enhance welfare, production performance and favour safe and easy handling.

Good practice (minimum standards):

Feeding:

- Calves should be provided with regular access to high quality milk and/or feed which is supplied from a clean source or receptacle (when not fed by the cow).
- Calves should not have to compete for access to food or water sources.
- [See factsheet: calf nutrition](#)

Housing:

- Calves below 8 weeks, who have been separated from their dam, should ideally be housed in groups, but as a minimum in pairs. Single housing is only acceptable where there is exceptionally high disease risk on the individual farm outweighs the benefits of direct social contact.
- Housing should encourage the performance of natural behaviours such as social interaction, exploration and play. This requires

Calving care: Cow

Best Practice

Best practice farms achieve healthy, natural calving of their cows by selecting bulls for calving ease, careful management of pregnant animals, close monitoring at calving time to allow timely and effective interventions when needed and natural interactions with their calves.

Life Stages: heifers, cows

Why is this important?

A well-managed dry-off period (end of lactation to calving) significantly improves calving success and cow health at the beginning of lactation. Bull selection and optimal management of the pregnancy and calving periods are essential to prevent obstetric issues that can severely impair the health and welfare of both cows and calves.

Good practice (minimum standards):

Feeding

- Body condition scores should be between 3 and 3.5 (on a 0-5 point scale) at the time of calving.
- The diet must cover basic maintenance plus gestation requirements, allowing for condition gain in underweight animals.
- High roughage content should be provided at the beginning of the dry-off period, to encourage food intake.
- A diet similar to the composition of the lactating cow diet should be introduced around 3 weeks before calving, to allow the ruminal flora to adapt.
- Provide 150-200g/day/ per cow of mineral supplementation. Total calcium input should be limited to 60g per day.
- Water must be available, ad lib, at all times.

Housing

- Cows should be moved to a dedicated dry-off pen or paddock at dry off (when lactation ends).

Cow Reproductive Health

Best Practice

Best practice farms achieve excellent reproductive outcomes for dairy cows by selecting for positive reproductive traits, careful observation & monitoring at each stage of the cycle, timely and effective interventions when needed and promoting natural reproductive behaviours.

Life Stages: Cow

Why is this important?

The correct management of reproductive health is crucial to optimise reproductive performance and ensure the welfare of both cows and their calves. Giving a good life to cows requires consideration of their physiological and behavioural needs. Reproductive problems are the main reason for economic losses in the farm, resulting in slaughter and requirement for replacement stock.

Good practice (minimum standards):

Feeding:

- Cows should have access to an adequate and balanced diet, based on their physiological status, age and weight. It is important for the farmer to use the advice of a specialised nutritionist.
- Excessive energy given during milking and dry phases results in overweight cows with higher risk of dystocia, assisted calving and post-partum metabolic problems (fat cow syndrome, hypocalcaemia, lactic acidosis, ketosis) or other complications (retained foetal membranes/endometritis, delay in uterus involution, anoestrus, mastitis). [See factsheet: calving care: cow](#)
- During milking, it is necessary to give a balanced diet including adequate amount of energy and a correct intake of minerals and vitamins, in order to avoid excessive weight loss that would be another cause of the reproductive disorders above mentioned.

Heifers & Cows- Managing the Dry Period

Best Practice

Best practice farms promote optimal preparation of heifers and cows to calving by adjustment of the diet, treatment of subclinical mastitis, and habituating the animals to post-calving conditions.

Life Stages: heifers, cows

Why is this important?

A well-managed dry-off period (end of lactation to calving) significantly improves calving success and cow health at the beginning of lactation. Careful dietary and environmental care in this last stage of pregnancy are essential to prevent obstetric issues that can severely impair the health and welfare of both cows and calves.

Good practice (minimum standards):

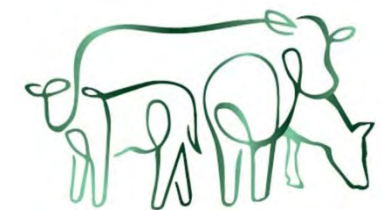
Feeding

- Body condition scores should be between 3 and 3.5 (on a 0-5 point scale) at the time of calving.
- During pregnancy, the diet must cover basic maintenance plus gestation requirements, allowing for condition gain in underweight animals.
- High roughage content should be provided at the beginning of the dry-off period, to encourage food intake.
- A diet similar to the composition of the lactating cow diet should be introduced around 3 weeks before calving, to allow the ruminal flora to adapt.
- Provide 150-200 g/day per cow of mineral supplementation. Total calcium input should be limited to 60g per day.
- Water must be available, ad lib, at all times.

Task 3: drafting best practices



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- **The content**
 - **Format:** Clear, practical
 - **Content:** Applicable and useful in practice
- **Suggestions** of educational materials: references, resources, tools, illustrations, case studies...
- **Recommendations/suggestions** to facilitate implementation
 - Needs of communication
 - Needs of training



Photo: Birgitta Staaf Larsson

Task 4: Consultation of stakeholders

TASK 5: THE ROADSHOW



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Country-Place	Period	Target audience	Expected participants
France	2023	Farmers, other business operators, technicians	100
Germany	2023	Farmers, other business operators, technicians	150
Greece	2023	Farmers, other business operators, technicians	50
Ireland	2023	Farmers, other business operators, technicians	150
Italy	2023	Farmers, other business operators, technicians	150
Poland	2024	Farmers, other business operators, technicians	150
Spain	2024	Farmers, other business operators, technicians	50
Sweden	2023	Farmers, other business operators, technicians	50
The Netherlands	2024	Farmers, other business operators, technicians	50
9 events			900

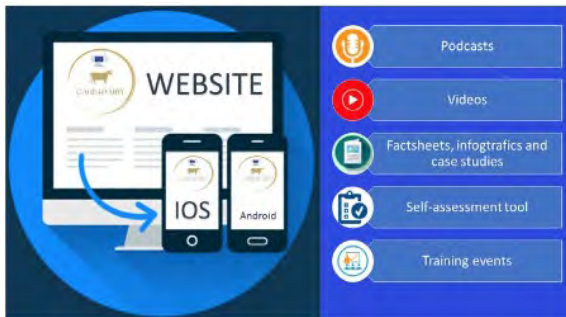
TASK 5: THE CARE4DAIRY APP



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- **Complementary to the Website**
- **Scope:** To encourage the adoption of AW best practices in the Dairy Sector
- **Objective(s):**
 - To give tools to detect early AW problems
 - To improve knowledge on animal physiology and behaviour & on AW
- **Primary users:** Farmers & farm workers, Potentially vets & farm advisors
- **Functionalities/Content :**
 - Practical self evaluation tools on AW to assess one's practices and identify room for improvement
 - Anonymised benchmarking to stimulate continuous improvement
 - Support to select measures that are most effective to improve the welfare situation on-farm
 - Protocols or pedagogic resources for the implementation of best practices
 - Information on relevant training
 - Weather forecasts to anticipate thermal stress and modify practices
 - Virtual area to exchange experiences in the implementation of best practices
 - Output should be 'viewable' on pad or PC in order to share and discuss with farm advisors





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- **How to make the CARE4DAIRY App appeal to users**

- Ask farmers to contribute to app design and content definition
- Tailoring: providing relevant information for a type of farm
- Farmers language*
- Good use of graphics
- Easy to use
- Explanation on benefits of applying best practices (for animals & farmers)
- It should be an operative tool with dynamic information that complements the Care4dairy Website
- Provide farmers with a benefit (e.g. evidence of the level of implementation of the best practice guidelines or benchmarking).



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- The App could be maintained by the EURCAW R&E after the CARE4DAIRY project conclusion

* Translated into French, German, Greek, Italian, Polish & Spanish



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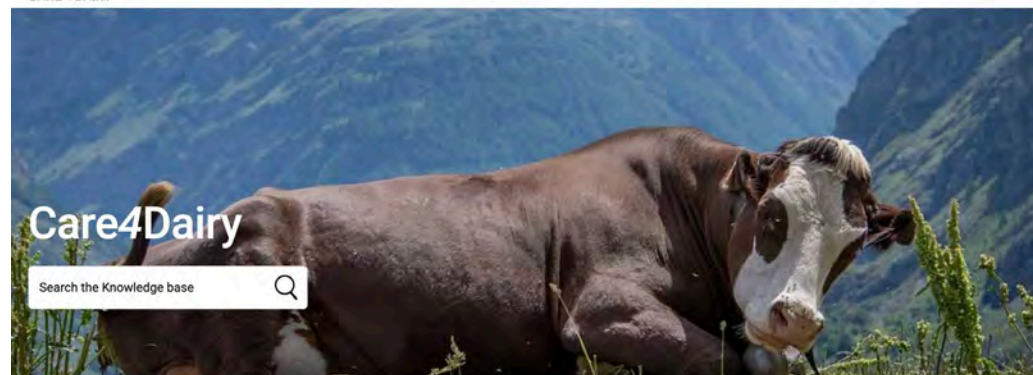
- www.care4dairy.eu will launch September 2023
- Multilingual – initially available in English, French, Italian and Greek. Spanish, German and Polish will be added in phase 2
- Central platform to access the App, best practice guides, training and the roadshow updates



CARE4DAIRY



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News



Best Practice Guides >

Training & Events >



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Languages

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Task 5: Website Development

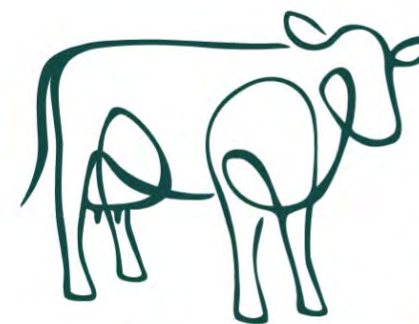
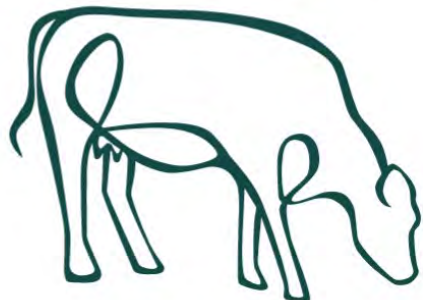


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Thank
you for your
attention



Contact: info@care4dairy.eu