

VCS DRAFT PROJECT DESCRIPTION



UK COWCREDIT PROJECT

A UK DAIRY INITIATIVE TO REDUCE
METHANE FROM ENTERIC FERMENTATION
AND SUPPORT FARMERS

MOOTRAL

Project Title	<i>UK CowCredit project: A UK dairy initiative to reduce methane from enteric fermentation</i>
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1 PROJECT DETAILS

1.1 Summary Description of the Project

The UK CowCredit project (Project or Project activity) aims to involve the UK dairy industry with the purpose to reduce greenhouse gas (GHG) emissions from the livestock sector. The project activity introduces Mootral® natural feed supplement into dairy cattle diet aiming to reduce methane (CH₄) emissions from enteric fermentation by direct inhibition of methanogens in the rumen. The initial instance of the project activity is a dairy farm with 400 dairy cows which has implemented the Mootral® natural feed supplement into the cattle diet starting on the 7th of May 2019. The dairy farm is located in Lancashire county in North West England Lancaster, United Kingdom.

The project activity aims to add more instances over the 10 years of the first crediting period. The project implementation results in a substantial net reduction of GHG emissions, because of the avoidance of CH₄ release into the atmosphere. Methane is a by-product of the enteric fermentation process and is expelled by the animal through belching. Prior to the start of the proposed project activity, there were no similar enteric methane reduction activities, therefore, this leads to CH₄ released into the atmosphere (“the business as usual”). Over the 10 years of the first crediting period, the project will generate an estimated annual average reduction of 215'050 tons of carbon dioxide equivalent (tCO₂e) and 2'150'500 tons over the 10 years of the first crediting period. The Project is quantified and will be monitored according to VCS methodology “VM0041 Methodology for the Reduction of Enteric Methane Emission from Ruminants through the Use of 100% Natural Feed Supplement” and falls under VCS Sectoral Scope 15, Livestock and manure management.

1.2 Sectoral Scope and Project Type

The Project falls under the VCS Sectoral Scope: Livestock and manure management. The Project will use the VCS methodology: “VM0041 Methodology for the Reduction of Enteric Methane Emission from Ruminants through the Use of 100% Natural Feed Supplement”.

1.3 Project Eligibility

The project will meet all the criteria set out in the VCS program criteria for GHG and programs. The project will reduce methane from enteric fermentation in dairy livestock operations. These reductions wouldn't have happened if the project had not been carried out. These reductions will be permanent as long as the dairy livestock operations are part of the project. The project activity does not include carbon footprint assessments or carbon neutrality claims. The project is eligible under the scope of the VCS Program.

1.4 Project Design

Eligibility Criteria

1.5 Project Proponent

Organization name	Mootral SA
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1.6 Other Entities Involved in the Project

Organization name	
Role in the project	
Contact person	
Title	
Address	
Telephone	
Email	

1.7 Ownership

Mootral SA (hereafter “the project proponent”) has the ownership and legal right of the project activity. Project ownership arising by an agreement with the dairy livestock operation owners which vests project ownership in the project proponent. The project proponent is not expected to be the owner of the dairy livestock operations, unless there is documentation that legally proves the opposite. Mootral SA has the ownership and legal right of the Mootral® feed supplement leading to GHG emission reductions.

1.8 Project Start Date

The project start date is the 7th of May 2019. The initial instance of the project activity is a dairy farm with 400 dairy cows which has implemented the Mootral® natural feed supplement into the cattle diet starting on the 7th of May 2019.

1.9 Project Crediting Period

The project crediting period is 7 years from 07/05/2019 to 06/05/2026 (1st crediting period), *twice renewable for a total of 21 years.*

1.10 Project Scale and Estimated GHG Emission Reductions or Removals

Project Scale	
Project	✓
Large project	

Year	Estimated GHG emission reductions or removals (tCO ₂ e)
Year 2019	500
Year 2020	50'000
Year 2021	150'000
Year 2022	250'000
Year 2023	250'000
Year 2024	250'000
Year 2025	250'000
Year 2026	300'000
Year 2027	300'000
Year 2028	350'000
Total estimated ERs	2'150'500
Total number of crediting years	10 (1st crediting period)

Average annual ERs	215'050
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1.11 Description of the Project Activity

The project aims to reduce anthropogenic GHG emissions resulting from agricultural activities, dairy livestock operations, in the United Kingdom (UK). Ruminants, in particular, release methane (CH₄) as a result of their digestion process of feed material in the rumen. These are methane emissions from enteric fermentation and are significant contributors to GHG emissions and climate change.

The specific objective of the project activity is to reduce enteric methane emissions (CH₄) by introducing a natural feed supplement, Mootral[®], into dairy cows' diet while maintaining the number of animals. This process results into a substantial net reduction of GHG emissions, because of the avoidance of CH₄ release into the atmosphere, which would occur under normal operating circumstances ("the business as usual").

The Mootral[®] feed supplement reduces methane emissions by direct inhibition of the activity of Archaea in the rumen, without affecting feed utilization or other microorganisms. The supplement is based on a proprietary combination of active compounds from garlic and flavonoids derived from citrus. Research shows a nearly complete inhibition of emitted methane in lab experiments that reaches up to 38% reduction under real farm conditions. Results from an in-vivo UK farm study (Vrancken et al., 2019) showed methane reduction of 38.3% for Jersey cows and 20.7% for Holstein-Friesian cows. Additionally, the Mootral[®] feed supplement improves rumen fermentation and increases productivity and health.

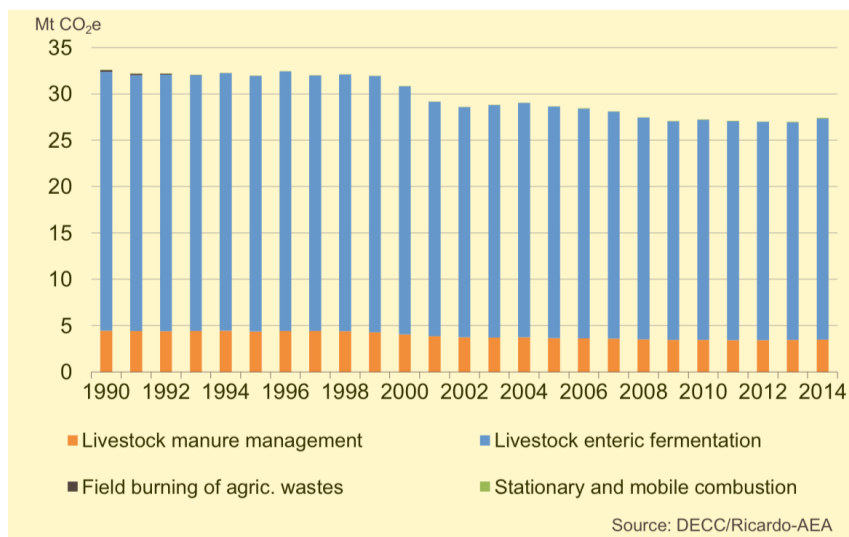
The dose of Mootral[®] feed supplement can be defined per animal weight (g/kg) or per feed dry matter (g/kg). Mootral[®] can be administered in various ways, for example mixed with the silage or integrated into pellets. The actual dosage and feeding technique are being adjusted based on the specific dairy operation conditions of the project. The implementation of the project results in daily reductions equal to the emissions reduction factor provided by the manufacturer or directly measured on the dairy livestock operation.

At the United Nations Climate Change Conference in 2015, a key component of the global agreement was to protect food production whilst also reducing GHG emissions (UNFCCC, 2015)¹. Given the significance of CH₄ as a GHG, reducing enteric CH₄ emissions from ruminants could prove an important strategy for countries to meet reduction targets in global emissions and sustainable food production.

¹ UNFCCC. Available online: https://unfccc.int/sites/default/files/english_paris_agreement.pdf (accessed on November 2019)

The Figure 1 below shows agriculture’s contribution to total UK methane emissions. The major agricultural sources of methane are enteric fermentation (digestive processes) and emissions from manure management.

Figure 1 Methane emissions from agriculture



1.12 Project Location

This project activity is implemented in the United Kingdom. The first instance is located in Lancashire county in North West England Lancaster, United Kingdom. Farm Coordinates: 54.2251° N, 2.7108° W

1.13 Conditions Prior to Project Initiation

The baseline scenario for this activity is the situation existing prior to the starting date of the implementation of the feed supplement into the cows’ regime. It provides the continued use of the conventional feeding regime and management strategies that represent average UK dairy and farming operations without using any other feed supplement or additive to reduce enteric methane emissions. The activity allows any feeding practice when the feed supplement is being incorporated into the management strategy. GHG reductions are quantified by comparing actual project performance to a performance standard baseline. (see Section 3.4 (Baseline Scenario)).

1.14 Compliance with Laws, Statutes and Other Regulatory Frameworks

The project is in compliance with relevant laws, statutes and other regulatory frameworks. This project activity is a voluntary initiative undertaken by “MOOTRAL SA” which is the project proponent. Until today there are no local, state, or federal emissions trading programs or other regulatory binding requirements for the project activity. Also, there are no mandatory requirements in the United Kingdom enforcing the reduction of enteric methane emissions.

1.15 Participation under Other GHG Programs

1.15.1 Projects Registered (or seeking registration) under Other GHG Program(s)

1.15.2 Projects Rejected by Other GHG Programs

1.16 Other Forms of Credit

1.16.1 Emissions Trading Programs and Other Binding Limits

1.16.2 Other Forms of Environmental Credit

1.17 Additional Information Relevant to the Project

Leakage Management

Commercially Sensitive Information

Sustainable Development

Further Information

2 SAFEGUARDS

2.1 No Net Harm

2.2 Local Stakeholder Consultation

2.3 Environmental Impact

2.4 Public Comments

2.5 AFOLU-Specific Safeguards

3 APPLICATION OF METHODOLOGY

3.1 Title and Reference of Methodology

VM0041 Methodology, version 1: Reduction of Enteric Methane Emission from Ruminants through the Use of 100% Natural Feed Supplement.

3.2 Applicability of Methodology

The proposed project activity reduces enteric methane (CH₄) emissions through the inhibition of methanogenesis due to the introduction of Mootral® natural feed supplement into ruminants' diet (dairy cows). Specific conditions which can be applicable to the methodology are shown below:

1. Livestock producers must feed their animals a natural feed supplement which reduces enteric CH₄ emissions by direct inhibition of methanogens in the rumen.
 - ⇒ This project activities include the application of Mootral® feed supplement. Proof of purchase will be provided through delivery receipts and/or invoices
2. Livestock in the project boundaries must only include ruminant animals.
 - ⇒ This project activities includes only dairy cows.
3. The project feed supplement must meet the following conditions:
 - a. The active ingredients of the feed supplement must be 100% natural plant-based or macroalgae based and non-GMO. This includes extracted components of plants. The feed manufacturer needs to provide a non-GMO certificate based on lab analysis.
 - ⇒ This project activities include the application of Mootral® feed supplement. The project proponent will provide a non-GMO certificate/report based on lab analysis.
 - b. The feed supplement must have been demonstrated to comply with all feed and food regulations in each national or subnational (including local) jurisdiction in which it is consumed. Where conflict arises between regulations, the most stringent standard will apply.
 - ⇒ This project activities include the application of Mootral® feed supplement. The project proponent will provide relevant compliance regulations.

c. The feed supplement must have no significant negative health or performance impacts on the animal to which it is fed. Where conflict arises between regulations, the most stringent standard will apply.

⇒ This project activities include the application of Mootral® feed supplement. The project proponent will provide relevant documentation demonstrating no significant negative health or performance impacts on the animal to which it is fed.

d. The feed supplement must be used as per feeding instructions provided by the manufacturer. The instructions provide critical defining conditions to secure the default level of reduction of the enteric methane emissions, such as the feeding routine and dose of supplement per kg of DMI to the animal.

⇒ The monitoring process of this project activities will secure the applicability and usage of the feed supplement

4. Emission reductions generated by the use of other feed supplements and/or activities (e.g. improving animal productivity or nutritional and management strategies), the objective of which does not lead to the inhibition of methanogenesis, cannot be claimed through this methodology. This is to prevent overestimation of emission reductions achieved.

⇒ Feed records provided by the farm or farm's nutritionist will demonstrate the use or not of other feed supplements

5. The implementation of project activities must confirm that the herd of ruminants in a given operation is fed the project feed supplement. For this purpose, the project proponent must be able to trace the feed supplement from on-farm consumption.

⇒ The monitoring process of this project activities will secure the applicability and usage of the feed supplement. Additionally, the project proponent is the manufacturer of the feed supplement.

6. The feed manufacturer needs to provide proof of evidence for no increase in the manure emissions due to feed supplementation (e.g., evidence-based literature, peer-reviewed publications, study reports).

⇒ The project proponent will provide the relevant data evidence-based literature, peer-reviewed publications, study reports

7. Baseline emissions included in this methodology are CH₄ production from enteric fermentation and is determined as the average activity over at least three continuous years prior to project implementation. Therefore, the project activities are required to meet the following conditions:

a. Where project areas involve livestock farms that were operating prior to the start of project activities, reliable data (e.g., gross energy intake and dry matter intake) per animal

group must be available for a minimum of three years if using baseline emissions Option 2 and two years if using baseline emissions Option 1.

⇒ Farm records

b. Where project areas involve livestock farms that no farm records and farming data are available, the project proponent must be able to provide evidence to substantiate the animal group to which each new project area is allocated according to the average group as described in national or regional statistical accounts (i.e., the baseline emissions will be considered as the average activity of where the project is located).

⇒ Available data to be provided at the validation

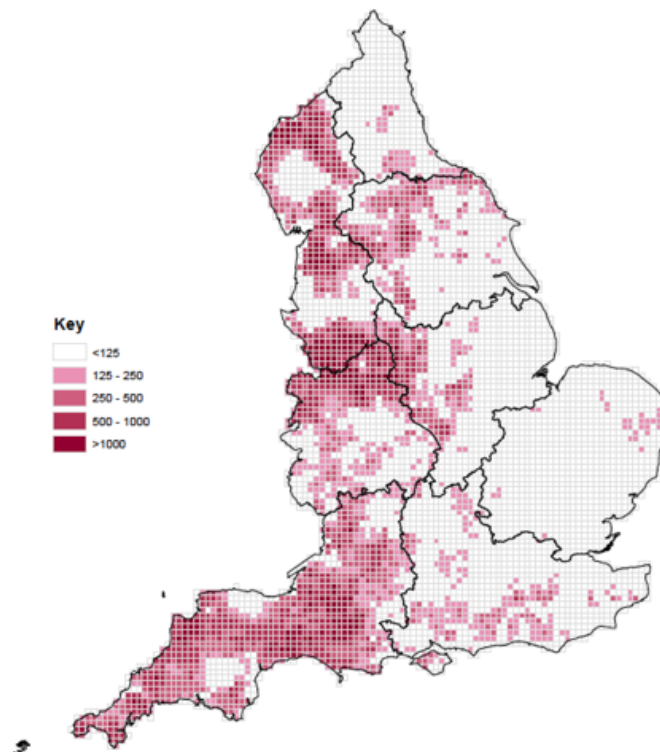
3.3 Project Boundary

Source		Gas	Included?	Justification/Explanation
Baseline	Enteric Fermentation	CO ₂	No	No changes in biogenic CO ₂ emissions are expected due to the project activity.
		CH ₄	Yes	CH ₄ emissions from enteric fermentation, prior to the project technology implementation, represent the major source of emissions in the baseline scenario.
		N ₂ O	No	Not a by-product of the enteric fermentation process and is not expelled by the animal through burping.
		Other	No	No other emissions expected
Project	Enteric Fermentation	CO ₂	NO	No changes in biogenic CO ₂ emissions are expected due to the project activity.
		CH ₄	YES	CH ₄ emissions from enteric fermentation are the major source of emissions in the project scenario.
		N ₂ O	NO	No changes in biogenic N ₂ O emissions are expected due to the project activity.
		Other	NO	No other emissions expected
	Supplement Production	CO ₂	YES	CO ₂ emitted from supplement transportation and production
		CH ₄	YES	CH ₄ may be emitted from combustion of fossil fuels during the processing.

Source	Gas	Included?	Justification/Explanation
	N ₂ O	NO	N ₂ O emissions are not expected during the production process
	Other	NO	No other emissions expected during the production process

This project activity encompasses all the dairy cows in the UK; therefore, project boundary includes the dairy livestock operations in the UK. There are currently about 2 million dairy cows living on the UK's 14,550 dairy farms. Ninety per cent of dairy cows in the UK are the Holstein-Friesian breed and other breeds include Ayrshire, Guernsey and Jersey cows. The *Figure 2* below illustrates the spatial distributions of UK dairy cows.

Figure 2 Distribution of UK dairy cattle (2010)



Source: Defra Cattle Tracing System and June Survey of Agriculture
 Definition of dairy cattle is female dairy cattle over two years old with offspring i.e. the main milking herd.
 Crown Copyright. All rights reserved. Defra Licence no. 100018880 2011

The United Kingdom of Great Britain and Northern Ireland, commonly known as the United Kingdom (UK) or Britain, is a sovereign country in Western Europe. Lying off the north-western coast of the European mainland, the UK includes the island of Great Britain, the north-eastern part of the island of Ireland and many smaller islands. With an area of 242,500 square kilometres, the UK is the 78th-largest sovereign state in the world. It is also the 21st-most populous country, with an estimated 65.5 million inhabitants in 2016.

Figure 3 Geographical boundary of the country where the project activity is implemented



The initial instance of the project activity is a dairy farm with 400 dairy cows which has implemented the Mootral® natural feed supplement into the cattle diet starting the 7th of May 2019. The dairy farm is located on the territory of Lancaster, North West England, United Kingdom. It is farming business producing dairy products and has been farming dairy cattle since April 1960. The company's primary activities and products are fresh milk. The farm cows are fed on a mixture of grass, wheat and an additional blended feed, with the family growing grass and wheat across 20 hectares (50 acres) on-farm.

Figure 4 Geographical boundary of the project’s activity first farm (instance)



3.4 Baseline Scenario

The baseline scenario for this activity is the situation existing prior to the starting date of the implementation of the fed supplement into the cows’ regime. It provides the continued use of the conventional feeding regime and management strategies that represent average UK dairy and farming operations without using any other feed supplement or additive to reduce enteric methane emissions. The activity allows any feeding practice when Mootral® is being incorporated into the management strategy. GHG reductions are quantified by comparing actual project performance to a performance standard baseline.

The study by Eckert et al., (2018) provides evidence from 12 commercial dairy farms in the UK with different feeding systems for years 2011 to 2013. This study is a representation of typical dairy farms in the UK. All cows were fed a partial mixed ration (PMR) containing forage and concentrates ad libitum and half the farms allowed the cows access to grass (PMR + grazing) during the day. The tables below provide the records on the composition of diet and forage **Table 1** and concentrate feeds

Table 2 as described in the article. The results of the study

Table 3 conclude that overall there is no difference in emissions between feeding systems (log-transformed mean of 0.3 mg/L for PMR and 0.36 mg/L for PMR with grazing, SED = 0.14, $P > 0.05$).

Table 1 Forage percentage (grass percentage in the diet and in parentheses) in the diet and forage nutrient content for each farm.

Farm	Forage	Dry Matter (DM)	Starch	Neutral Detergent Fibre	Crude Protein	Oil	Metabolisable Energy
	%	g/kg	g/kg DM	g/kg DM	g/kg DM	g/kg DM	MJ/kg DM
A	68.7 (4.5)	316	133	424	132	40	10.2
B	68.4 (58.8)	172	0	362	237	31	11.0
C	48.5 (3.8)	398	6.1	291	74	22	11.2
D	57.9 (1.3)	344	186	452	109	26	11.2
E	62.6 (1.4)	494	74	507	143	51	10.7
F	75.6 (46.7)	304	0	426	153	26	11.1
G	60.2	263	156	333	79	18	10.0
H	45.8	351	6	470	132	32	10.6
I	57.1	570	0	592	104	18	9.8
J	49.4	313	124	414	128	29	11.2
K	58.3	394	56	474	116	18	11.0
L	68.0	283	45	440	124	48	10.3

Table 2 Concentrate percentages in the diet and concentrate nutrient content for each farm

Farm	Concentrate	Dry Matter (DM)	Starch	Neutral Detergent Fibre	Crude Protein	Oil	Metabolisable Energy
	%	g/kg	g/kg DM	g/kg DM	g/kg DM	g/kg DM	MJ/kg DM
A	31.3	874	187	246	193	57	12.7
B	31.6	880	127	285	162	57	12.2
C	51.5	879	124	321	195	57	12.1
D	42.1	872	91	230	207	52	12.1
E	37.4	870	139	262	181	47	11.5
F	24.4	886	320	169	178	49	12.4
G	39.8	885	191	126	252	46	12.1
H	54.2	870	131	200	150	52	13.0
I	42.9	867	290	157	180	42	12.7
J	50.6	888	143	259	140	36	12.6
K	41.7	868	190	213	187	81	13.4
L	32.0	873	220	226	178	58	12.0

Table 3 Daily methane emissions

Farm No.	Number of Cows	Number of Milking Stations	Feeding System	Month of Sampling	Lactation No.	Days in Milk	Milk Yield	Live Weight	Dry Matter Intake	Methane Emissions
							kg/day	kg	kg/day	mg/L
A	65	1	PMR + Grazing	10	4.1 (2.4)	79 (51)	24.3 (8.6)	586 (74)	16.9 (2.5)	1.9 (1.2)
B	53	1	PMR + Grazing	9	3.2 (1.9)	173 (92)	28.2 (10.0)	622 (31)	18.3 (1.4)	2.6 (1.5)
C	51	1	PMR + Grazing	4	3.6 (1.8)	168 (99)	28.5 (10.3)	642 (60)	18.9 (1.8)	3.5 (2.5)
D	47	1	PMR + Grazing	4	2.3 (1.2)	161 (113)	27.7 (11.2)	611 (59)	18.1 (1.9)	2.5 (1.7)
E	66	1	PMR + Grazing	5	4.0 (3.3)	130 (86)	28.8 (9.4)	625 (57)	18.5 (1.8)	3.7 (3.2)
F	45	1	PMR + Grazing	6	3.5 (2.3)	135 (80)	27.0 (9.2)	598 (72)	17.7 (2.3)	4.0 (2.2)
G	116	2	PMR	6	2.6 (1.6)	159 (90)	26.1 (8.8)	625 (73)	18.2 (2.1)	4.0 (2.6)
H	96	2	PMR	8	2.9 (2.0)	163 (102)	27.1 (9.9)	593 (75)	17.5 (2.2)	3.9 (2.2)
I	46	1	PMR	11	1.0 (0.0)	99 (31)	25.2 (5.4)	547 (44)	16.2 (1.3)	0.6 (0.5)
J	55	2	PMR	11	3.7 (1.8)	136 (111)	28.9 (10.9)	690 (63)	20.1 (2.0)	2.4 (1.1)
K	110	2	PMR	2	2.4 (1.4)	156 (92)	35.6 (12.6)	603 (74)	18.6 (2.4)	2.4 (1.3)
L	80	2	PMR	2	2.8 (1.8)	158 (87)	19.1 (8.3)	578 (71)	16.4 (1.9)	3.7 (3.1)
Mean ¹ PMR + Grazing					3.7 (0.03)	143 (14.3)	26.9 (1.7)	612 (15.6)	17.9 (0.5)	
Mean ¹ PMR					2.6 (0.04)	145 (13.9)	26.5 (1.6)	607 (15.4)	17.8 (0.5)	
SED					0.05	19.8	2.3	21.9	0.7	
<i>P value</i>					<0.001	0.912	0.854	0.809	0.835	

¹ Predicted mean \pm s.e. presented for both feeding systems. Linear mixed model with unique cow ID within farm, milking station within farm and month of sampling added as random effects and covariates centred to a zero mean. SED means standard errors of differences.

The project emissions in the baseline scenario are estimated as the sum of annual emissions from enteric fermentation. The project follows the two options 1 and 2 for determining the enteric emissions factor (EF_{Entericj}) as described in the methodology “VM0041 Methodology for the Reduction of Enteric Methane Emission from Ruminants through the Use of 100% Natural Feed Supplement” Depending on the availability of relevant livestock group data and measurements, each livestock group will choose the most appropriate option to determine the baseline emissions. The Table 4 provides an example for options for determining the enteric emissions factor (EF_{Entericj}).

Methane emissions are a function of dry matter intake (DMI) by cows. DMI is the amount of feed an animal consumes per day on a moisture-free basis and is determined by the energy available to the animal through food after accounting for losses in digestion, gases and urine (the metabolizable energy (ME)). The baseline emissions will be estimated for each animal group identified by the following livestock characteristics:

- By cattle type and breed. Four categories will be used for dairy cattle type: Dairy cows, dairy heifers, replacements > 1 year and dairy calves < 1 year.
- By UK production system. For example, emissions factors will be estimated for three production systems: upland, lowland, and hill breeding system based on holding location.
- Diet characterization will be based on farm data of DMI per animal group and of feed intake from grazing, forage, silage and concentrates.

The first farm of this project activity is a commercial farm which has two herds of dairy cows, around 280 Holstein-Friesian (HF) and 120 Jersey. The boundary of this farm encompasses the operations where the cows are raised and fed as well as the facility site. The cows are milked

twice a day in a swing over parlour. The farm cows are fed on a mixture of grass, wheat and an additional blended feed, with the family growing grass and wheat across 20 hectares (50 acres) on-farm. The baseline scenario provides for the continued use of typical feeding and management strategies that represent average dairy business operations.

Table 4. Demonstration of options for determining the baseline enteric emissions factor (EF_{Enteric}) per livestock group

<i>Dairy livestock group</i>	<i>Option</i>	<i>Justification</i>
Group 1 (Dairy cows, Holstein-Friesian)	2 (calculate the enteric emission factor for each animal group by applying an IPCC Tier 2 method)	No available data for Group 2 in existing national statistics, national industry sources, research studies or International Environmental Agencies or FAO statistics.
Group 2 (Dairy cows, Jersey)	2 (calculate the enteric emission factor for each animal group by applying an IPCC Tier 2 method)	Data are available for Group 2 in existing national statistics, national industry sources, research studies or International Environmental Agencies or FAO statistics.
Group...
Group n (TBD)	2	...

3.5 Additionality

This project activity demonstrates and assesses the additionality of the project, in accordance with the applied methodology, taking into account the following:

- The activity method for the demonstration of additionality, will need to demonstrate regulatory surplus. National, State and local legislations do not require dairy farms, including small and large operations, to report or reduce methane from enteric fermentation.
- The activity method for the demonstration of additionality, will need to demonstrate the project activity has achieved a low level of penetration relative to its maximum adoption potential. However, *this project activity uses a new technology, Mootral® feed supplement, that has been commercially available worldwide for less than three years, due to barriers to the uptake of the technology. This project activity implementation will require the purchase of Mootral®, which is an addition to the existing farmers variable costs. Farmers make multiple decisions in the agricultural cycle about the adoption of products and practices. Farmers' decisions about whether and how to adopt new*

technology are often the result of a comparison of the uncertain benefits of the new invention with the uncertain costs of adopting it. For adoption to occur, farmers need to know that a technology exists, believe that it will improve productivity, and understand how to use it effectively. Given the early stage of Mootral® for reducing enteric methane emissions

3.6 Methodology Deviations

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

4.2 Project Emissions

4.3 Leakage

4.4 Net GHG Emission Reductions and Removals

Year	Estimated baseline emissions or removals (tCO ₂ e)	Estimated project emissions or removals (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated net GHG emission reductions or removals (tCO ₂ e)
Year A				
Year B				
Year C				
Year...				
Total				

5 MONITORING

5.1 Data and Parameters Available at Validation

Data / Parameter	
Data unit	
Description	
Source of data	
Value applied	
Justification of choice of data or description of measurement methods and procedures applied	
Purpose of Data	
Comments	

5.2 Data and Parameters Monitored

Data / Parameter	
Data unit	
Description	
Source of data	
Description of measurement methods and procedures to be applied	
Frequency of monitoring/recording	
Value applied	
Monitoring equipment	
QA/QC procedures to be applied	
Purpose of data	

Calculation method	
Comments	

5.3 Monitoring Plan

APPENDIX