# IAgrE Student Awards

## NOMINATION SUMMARY

**IAgrE CNH Industrial Award* / Student Project Award***
**Safety Award***
***please delete as appropriate:**

**PROPOSER:** (usually Course Director/Head of Department)

**Name:** EMILY SMITH

**Position:** Curriculum Leader for Agriculture

**University/College:** (name and address) Sparsholt College Hampshire, Westley Lane, Winchester, SO21 2NF

| **Contact details:** | **Tel:** 01962 797212 | **Email:** ejsmith@sparsholt.ac.uk |
|---|---|---|

**DETAILS OF NOMINATION:**

**Name of Student/Group of Students:** Emelia O'connell, advanced technical extended diploma in agriculture

**Personal contact details (i.e not college) to enable us to contact the student(s) once their course has ended:**

**Home Tel:** **Mob:** 07305857306 **Email:** e.oconnell111@gmail.com

**Name of course studied:**

| **Period studied** | **From:** September 2023 | **To:** June 2025 |
|---|---|---|

**Qualification to be gained:** Advanced technical diploma in agriculture

**Project Title:** Economic, environmental and social contrasts between a small family run dairy farm and a commercial dairy farm.

**Details of material submitted with nomination:** (Project/Exec Summary/DVDs etc)

- word document of project

| **SIGNED BY PROPOSER:** | **DATE SUBMITTED:** 16/10/25 |
|---|---|

***If you wish to provide any additional information to support this nomination please do so in a covering letter. When complete, return this form, together with the supporting documents, to***

The Secretariat, IAgrE, The Bullock Building (Bldg 53), University Way, Cranfield, Bedford MK43 0GH
secretary@iagre.org

***NB All work submitted is treated with complete Confidentiality, no part of the paper will be published by IAgrE except for the Title and Name of the winner in each category.***

Monday 20 October 2025

Dear IAgrE Awards Committee,

Please find attached the work of Emelia O'Connell for consideration for the IAgrE Awards. Emelia has demonstrated exceptional dedication, effort, and skill in this project, producing work of the highest standard.

Despite not coming from a farming background, Emelia has shown remarkable determination to excel in this field, approaching every challenge with enthusiasm and a strong work ethic.

We believe Emelia's work exemplifies the qualities celebrated by the IAgrE Awards and hope you will consider it for recognition.

Kind regards,

Emily Smith
Curriculum Leader for Agriculture

Kind regards,

Emily Smith

Curriculum Leader Agriculture and Agricultural Engineering

T Level Livestock and Arable (Year 2) Course Coordinator

Sparsholt College Group (incorporating Andover College, University Centre Sparsholt & Sparsholt College Services)

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# 309 Undertake a Specialist Project in the Land-Based Sector

# Task 1

**Title** Economic, environmental and social contrasts between a small family run dairy farm and a commercial dairy farm.

## Aim

Identify the method of farming that has the greatest social and economic impacts which is also the most environmentally sustainable.

## Objectives

- Compare cost inputs and outputs. E.g. feed, bedding, etc…
- Consider social factors such as work life balance
- Evaluate if the business can support itself or if diversification is required
- Look at employment standards and how many staff would be required
- Look at the markets both farms would sell to. Therefore, the price they can sell their milk

## Methodology

- **Evaluate the statistics and individual factors from a small family run dairy farm and the college dairy farm to and then complete an overall evaluation of them all.**
  Economic
  I will get past and recent financial results on both types of farms and put them onto a graph so that I can clearly identify patterns. This will also help me understand which farm is most economically viable, which fits into the economic section of my specialist project evaluation. Currently I predict that a commercial farm will be more economically viable due to having a bigger and more productive herd. As I begin collecting my results my predictions my change.

  Environmental
  To understand environmental factors, I will ask both farms what government environmental schemes they are part of and then research how these schemes make a positive difference to the environment. I will also look at the types of machinery on both farms and how often they are used because this will inform me about the release of machinery fumes from the farm. Waste is a big environmental factor that I need to collect data from. I will ask both farms how they dispose of organic, inorganic and hazardous waste and then evaluate the effect these methods have on the environment. I predict that commercial farms will generate more waste however they may do it in a more environmentally friendly way due to the restrictions of their milk contract. Family run farms may use the farmhouse bins to get rid of waste that should have been recorded and recovered by a licensed waste contractor, which can cause environmental impacts further down the waste removal process. However, when I look at how both farms remove their waste my option may change.

Social

Facts such as how much holiday the staff receive, do they receive sick pay and the length of working hours in a week are all results that I need to collect to help me decide what type of farm is better for social factors. This will be difficult as working hours change at different times of the year. For example, over calving the working hours are longer. I will get the staff to record the time that they start work and finish work for a week when additional challenges such as calving do not occur and compare these to help me understand the work life balance that the farm provides during an average week. I will ask commercial farm staff how much holiday they are given and what the procedure is for sick pay and then ask the family run farm how much holiday they take and what they do with the farm over this time as well as the procedure that they have if they are unwell. I predict that a commercial farm will be able to take more holiday as the employers will be legally obliged to offer a certain number of days. Whereas on a family run farm there is no one to check how many days the owners are taking for holiday so they may take less than the legal number of days as they cannot get someone to look after the farm for that long or that often. Also, commercial farms normally have several workers, which allows workers to have sick pay because there is someone else who can cover them. A family run farm often has few or no employees which makes it difficult for staff to take a sick day because they cannot find last minute cover. Working hours are probably more flexible on a family run farm because there is no boss to give you expected hours. This means that they can take breaks randomly throughout the day. However, this also means that there is no one to tell the farmer to stop working, which can cause the farmer to overwork and have a very unbalanced work life balance. In contrast a commercial farm, which will have required hours that they are supposed to work each week, and any overtime can be logged.

- **Diagrams**

  I will take pictures at the college dairy farm and the family run dairy farm that I help on. Some images that would help me come to a conclusion for economic, environmental and social factors are:

  Economic- pictures of official financial sales and purchase records, the production systems (parlour, sheds, grazing fields), the breed of cows, milk record prices

  Environmental- pictures of how waste is being stored on site, type and condition of machinery on the farms, where government environmental schemes are being implemented, slurry store, pictures of COSHH cabinet

  Social- Picture of the places where workers go to take a break, where PPE is stored, hygiene facilities (handwashing areas, boot washing areas, toilets)

- **Interview dairy workers and college lectures**

  I have arranged a few times over the course of the year to meet with dairy workers from both types of farms. This will give me authentic results, which will particularly help me compare the social aspects of both farms. Some questions that I plan to ask them are:

  Do you enjoy your job?

  Are you able to enjoy your days off or are you too tired from working?

  How frequently do you take time off?

  What aspects of the job would you change?

  How long have you been working on this type of farm?

  If could work on a small family run farm/ commercial farm, would you?

What environmental schemes are the farm part of?

Talking to my college lectures will help me grow my understanding in environmental legislations, milk contracts and legal working hours, which will enable me to better understand how well both farms are doing in alignment with these.

## Information sources

- **Small family run dairy farm that I help out on**
  I will be able to visit this farm whenever I would like to which enables me to get results all throughout the year, which makes the farm a reliable source of information. I will be able to get data from calving, early and late lactation, dry period and from calf rearing. This farm has previously helped me with college work so I know that they are willing to share data with me which I can photograph and use to compare against the commercial farm.

- **College dairy farm**
  I can visit this farm during my course practical's and talk to both the practical lectures and the dairy workers to get information. I can also arrange to meet up with the dairy workers in my free periods to interview them and ask to take pictures around the farm. I will also ask them if I can look at and records which will give me some of the farms economic and environmental data. I have access to the college dairy the whole time that I am at college, which makes it reliable.

- **Books from college library**
  Books may contain data from farms that I am not able to visit myself, which will give me a greater range of knowledge to come to my conclusion. The library is always open on the days that I am in college. As well as this I am able to visit the library on my days off college if I need to but not the weekends. I predict that I will visit the library in my free period most often and after college to have a look at the different books and magazines that they have available. When reading information from books I must remember that they could be bias and the statistics may not come from the UK, which is where I want to college data from. I need to look at the publishing date as well to check how recent the data is to help me decide whether or not it is relevant to my specialist project.

- **Online articles from AHDB, DEFRA, NFU, Farmers Weekly**
  I can access the internet wherever I am, which means that I can look at these websites with no restrictions. I am most likely to look at them when I am in college or am at home. Like with books I must look at the publishing date of the articles to check that they are giving me recent data. I must also be aware that the articles are people personal experiences so they will be bias but they will also help me understand how people are feeling about current affairs, which I can use in my specialist project.

- **National Farmers Union (NFU) magazines**
  I am part of the NFU student farmers programme, which means that I get a copy of the most up to date NFU magazine every month. For the last few months, I have been keeping hold of relevant articles that I can use in my specialist project so I can look at them and incorporate

articles into my specialist project whenever. Articles are normally bias. This can be helpful when trying to get information for in social factors as I can read personal accounts but I must read a range of different views before I make my final decision.

Overall, I think I will be able to access the information that I need easily. I think that the biggest challenge will be finding times when the dairy workers are available to talk to me due to their busy schedules on the farm.

## Resources required

I will use a range of different resources to access different facts and opinions. As I research, I must be aware that some sources may be bias so I will try and get several different opinions before coming to a conclusion. Some resources that I need are:

- Books
- Magazines
- Internet
- Television and Radio
- Subject experts

I plan to get a few books from the collect library because I have easy access to the library on the days that I am in college. These books will give me facts and statistics from a wide range of dairy farms across the UK. I will also look for graphs and pictures in these books that I can scan and add into my project. Books must be peer reviewed, which prevents information that is completely wrong being published. Books can quickly become outdated so I must check the publishing dates before relying on the information. Another downside is that with books the source of the information is sometimes unclear. Also, the publisher of the book will be bias, which I cannot forget as I am using the book for data collection.

I can easily access magazines from the college library, but I need to be aware that they are not very reliable because magazines are normally very bias. Magazines such as the NFU and Farmers Weekly will be bias from the farmers perspective. This is helpful for my project because I need opinions from people within the industry to help me understand social factors. Magazines will have articles containing people's personal stories and experiences, which will be relevant to current affairs.

I will use the internet to access a wide range of information from dairy farms in the UK. The reason that I will mainly use the internet to access this information is because I can quickly and easily access facts and statistics from a range of sources. I need to be conscious that some websites, such as Wikipedia, are not reliable. I will try and only use gov.uk or org.uk websites as these are more reliable. However, websites such as https://www.nfuonline.com/ I can trust for information from within the industry even though it is a .com website so it could be very bias. I should also look at the publishing date because I don't want to be collecting data from an out of date source.

Television and radio will be beneficial for my project because it presents the public perception of situations that are affecting dairy farmers. The public do not always have the full information before they make an opinion, which I need to remember as I consider different opinions. The news is a great way to stay up to date with the most recent legislation changes and news stations such as BBC normally get two contradicting opinions of the legislation, which makes the source more reliable. I can easily access BBC news wherever I have internet.

Subject experts are great because they are specialized within a specific field and have normally had experience within that specific part of the industry. They are often aware of up to date facts and statistics which I can add to my project. Subject experts still have opinions so will be bias naturally and they may be difficult to get hold of.

## Justification for your aim

I have chosen my aim because my project will help guide my future career path and others who are making the same decision. It is also a topic that I am interested in, and I know that I can easily access data from the college dairy farm and a small family run dairy farm that I help out on.

## 309 Undertake a Specialist Project in the Land-Based Sector

# Task 2

**Title-** Economic, environmental and social contrasts between a small family run dairy farm and a commercial dairy farm.

### Aims/objectives

- Compare cost inputs and outputs using gross margins
- Consider social factors such as work life balance
- Look at animal welfare and legislations supporting this
- Evaluate if the business can support itself or if diversification is required
- Look at employment standards and how many staff would be required
- Look at the markets both farms would sell to. Therefore, the price they can sell their milk
- Go to LAMMA and speak to specialists

### Specific operations/tasks

- **Compare cost inputs and outputs using gross margins**
  I am going to collect data from sales and purchases from the small family dairy farm, which will enable me to understand the gross margins. I will also try and do this from the college dairy farm so that I can compare the gross margins of both types of farms.

  I will also use website such as AHDB and NFU to get gross margins from commercial dairy farms because these websites will have data from across the whole country or a certain region.

- **Consider social factors such as work life balance**

To help me better understand this I will need to talk to people who have experience working on one or both of these farms. I plan to interview college dairy staff and the farm owner at the small dairy farm to help me understand personal experiences, which will help me come to a conclusion on what type of farm is able to provide better social factors for workers.
I will also look at welfare facilities such as where staff go in their breaks and hygiene facilities to better understand social factors. I need to be aware that these facilities will change from farm to farm so I cannot decide what type of farm has the best social factors purely from facilities available.

An advantage that I have from interviewing the owner of the small dairy farm is that they have worked on a commercial dairy farm and now run their own small farm. This means that they will be able to compare and justify opinions of the two different types of farms.

- **Look at animal welfare and legislations supporting this**
  I will use websites such as *(Gov.uk website and AHDB)* to learn the legislations that both types of farms must abide by. I will look at how legislations compare between the two types of farms and how easy they are to follow. I will also look at how well animal welfare is being maintained in both types of farms and I will look for common trends that both farms struggle with or lack, regarding animal welfare.

- **Evaluate if the business can support itself or if diversification is required**
  I will ask the dairy staff on both farms if/ how they diversify and the reasons behind their diversification strategies. For example, getting paid as part of environmental schemes or having a farm shop to sell the farms produce. This will help me understand if the farms are economically viable or if the business relies on diversification. I can use this information to compare the economic factors of both types of farm and how these link to social and environmental factors.

- **Look at employment standards and how many staff would be required**
  I would be able to understand employment standards by talking to dairy staff and hearing personal experiences from them. When interviewing staff, I would ask them questions such as how much holiday they get/take, do they get sick leave, how many staff work on the farm, do they have someone to share jobs with that require multiple people, how many hours do they normally spend working a day? These questions would give me a better understanding of employment standards, which will help me understand social factors more.

- **Look at the markets both farms sell to. Therefore, the price they can sell their milk**
  I would speak to college dairy workers about where they supply their milk to and ask for some requirements from their milk contract e.g. bactoscan results, what is their buttermilk percentage requirement, welfare restrictions. I will ask college dairy farm workers how much they sell their milk for so that I can compare to the price that the small family run dairy farm sell their milk for. I will also look at how the small family dairy farm sell their milk and how this changes the price that they can sell the milk for.

## Start and completion dates

| | | Start date | End date | Time | Resources | Possible disruptions | Remedial actions |
|---|---|---|---|---|---|---|---|
| Objective 1 | Compare cost inputs and outputs using gross margins | | | | | | |
| Task 1 | Regularly visit farms | 24/10/24 | 24/4/25 | 7 months | Collect data from sales and purchases | Farms may not have kept data organized | Organize the data yourself using dates |
| Task 2 | Compare gross margins of the two farms | 10/10/25 | 10/4/25 | 7 months | Calculator so I that I can work out the gross margins of both farms | If data is missing from one farm over a period of time this will make it difficult to compare | Only compare results that are from the same time period. |
| Task 3 | Use websites to get gross margins from commercial dairy farms across the UK | 10/10/24 | 10/4/25 | 7 Months | Access to the internet, computer or phone | Being in an area with no internet/ power cuts. | Research on my phone using mobile data. |
| Objective 2 | Consider social factors such as work life balance | | | | | | |
| Task 1 | Regularly visit farms | 24/10/24 | 24/4/25 | 7 months | Something to take pictures on and record data | Farms may not have kept data organized | Organize the data yourself using dates |
| Task 2 | Interview farm staff | 15/11/24 | 15/3/25 | 4 Months | Paper and pen to write interview questions on and record answers. | Dairy Farm are too busy to be interviewed | Ask them questions while working with them on a simple task e.g. mucking out |
| Task 3 | Look at welfare facilities | 24/10/24 | 24/4/25 | 7 Months | Phone camera to take pictures of welfare facilities to help me compare and document them | Welfare areas being refurbished so a temporary facility being there instead | Take pictures throughout the year as the facilities change |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Objective 3 | Look at animal welfare and legislations supporting this | | | | | | |
| Task 1 | Regularly visit farms | 24/10/24 | 24/4/25 | 7 months | Something to take pictures on and record data | Farms may not have kept data organized | Organize the data yourself using dates |
| Task 2 | Use government websites | 24/10/24 | 24/4/25 | 7 Months | Internet that I can access at college or home and a device to research on. | Power cuts, device breaking. | Neither of these will occur for 7 months so I can do this when I am not facing disruptions. |
| Objective 4 | Evaluate if the business can support itself or if diversification is required | | | | | | |
| Task 1 | Regularly visit farms | 24/10/24 | 24/4/25 | 7 months | Something to take pictures on and record data | Farms may not have kept data organized | Organize the data yourself using dates |
| Task 2 | Interview staff about diversification strategies | 14/2/2025 | 14/2/2025 | 1 day | Pen and paper to record information and write interview questions on before hand | Farms being too busy to be interviewed or not knowledgeable on diversification strategies | Look out for diversification strategies that you can see on the farm e.g. farm shop, environmental schemes |
| Task 2 | Research environmental schemes that the farm is part of | 14/2/2025 | 28/2/2025 | 2 weeks | Access to internet, laptop, phone to research and record findings | Farms may not tell you how much land they are doing schemes on so you cannot work out how much money they are depending | Ask staff how much land they are using for each scheme |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | on from these schemes | |
| Objective 5 | Look at employment standards and how many staff would be required | | | | | | |
| Task 1 | Regularly visit farms | 24/10/24 | 24/4/25 | 7 months | Something to take pictures on and record data | Farms may not have kept data organized | Organize the data yourself using dates |
| Task 2 | Find out average hours that the staff work | 1/11/24 | 30/11/24 | 1 Month | Create a table that the farm workers complete every week for a month stating the hours that they worked that week. | Workers forgetting to fill out their table | Getting workers to redo the table another month and remind them to complete it every week |
| Task 3 | Find out how much holiday leave they get/ take | 4/1/24 | 4/1/24 | 1 day | Somewhere to record the information. | If staff have not recorded how much holiday they have taken over the last year. | As them how long they went away for and how many holidays they went on to work it out yourself. |
| Task 4 | Find out how jobs are shared between workers | 4/1/24 | 4/1/24 | 1 day | Somewhere to record the information. | May not be enough workers to share jobs between | Record that and consider it in your evaluation |
| Objective 6 | Look at the markets that both farms sell to and the price that they sell their milk | | | | | | |
| Task 1 | Regularly visit farms | 24/10/24 | 24/4/25 | 7 months | Something to take pictures on and record data | Farms may not have kept data organized | Organize the data yourself using dates |
| Task 2 | Ask farm staff about the market that they sell to | 4/1/24 | 4/1/24 | 1 day | Somewhere to record the information. | May be a new business so may not have chosen their | Use the market that they are currently using |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | permanent market | |
| Task 3 | Find out how much the milk sells for | 4/1/24 | 4/1/24 | 1 day | A device to take pictures of records | Milk contract prices change frequently so commercial farms sell | Use the data from the farms current milk contract. |

Dependencies

All my objectives are dependent on me completing task 1 (regularly visit farms) on each of the objectives because I need the information that I will either see on the farms or collect when interviewing farm staff.

To fully understand objective 2 'consider social factors such as work life balance' I need to complete all three of my tasks (regularly visit farms, interview farm staff and look at welfare facilities). I require knowledge from each of these steps because amazing facilities for farm workers may not mean that the farm promotes good social factors. I will only find that out by interviewing staff (task 2).

Objective 4 is to 'evaluate if the business can support itself or if diversification is required'. I need to complete task 2 (Interview staff about diversification strategies) to understand what environmental schemes each farm is involved with so that I can complete task 3 (Research environmental schemes that the farm is part of).

If I do not complete task 2 (Find out average hours that the staff work) and task 3 (Find out how much holiday leave they get/ take) of objective 5, which is 'Look at employment standards and how many staff would be required' I would find it difficult to come to a conclusion. This is because I may find that one farm has shorter days, however the workers take less frequent holidays, whereas a farm that works longer days may take more frequent holidays. So only collecting data from one of these tasks may restrict me understanding the full picture of the employment standards on that farm.

Without completing task 3 of objective 6 (Ask farm staff about the market that they sell to) I will be unable to complete this section any further because I will need to know about these markets to research how much each farms sells their milk for, which is task 4 of this objective.

Gantt Chart

I have used a Gantt chart as a visual aid in planning how I am going to complete my specialist project. A Gantt chart is a clear way of seeing my goals for each month, which will be beneficial in helping me stick to them and prevent me falling behind.

As you can see the Gantt chart provides me with a broad plan. I have done this because I may not be able to complete all of the tasks in one month due to the amount of time that I can spend on farms and researching. Also, I need to prepare for fluctuating data over different times of the year for example during calving, which is why I have given myself 7 months to collect data.

I have described the key heading's bellow the Gantt chart and justified my reasons for each one.

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June |
|---|---|---|---|---|---|---|---|---|---|
| Initial question | | | | | | | | | |
| Decide and research aims and find out the best way to collect data from them | | | | | | | | | |
| Complete project proposal | | | | | | | | | |
| Collect data | | | | | | | | | |
| Go to LAMMA and speak to specialists | | | | | | | | | |
| Reflect and analysis comments from LAMMA specialists | | | | | | | | | |
| Analysis and compare all data | | | | | | | | | |
| Come to an overall conclusion | | | | | | | | | |

With each of the sections on the Gannt chat dependency is essential because you cannot reach an aim until a certain time period is done.

## Initial question

I am going to work out what aspects of agriculture best interest me and then look at topics that I can easily access data for, which also have enough points to consider to make up my entire project. I am going to finalise this down to three topics and then choose my favourite out of the three. From there I will create a comparison question giving me several opportunities to look at different aspects of agriculture. I will spend all of October deciding what my initial question should be.

## Decide and research aims and find out the best way to collect data from them

The best way for me to collect data and come to a conclusion is by setting myself aims, which will give me a range of different information about several aspects of my initial question. Once I have decided my aims I will need to spend time researching information about them to provide me with a

broader understanding of each aim. I will also have to decide how I will collect data from these aims so that I have evidence to back up my opinions in my conclusion. Most of the planning for this will happen in October and November once I have decided my initial question. However, I will constantly be researching and collecting data for my aims as the farming calendar progresses and legislations change. Throughout the whole project I will be constantly learning and asking new questions about my project to ensure that my understanding is the best that it can be.

## Complete project proposal

In December I will need to complete a refined plan with lots of details of how I am going to complete my specialist project. I will include deadlines for data collection so that I have enough time to come to my conclusion in the last three months of the project.

## Collect data

I will be collecting data throughout the entire project. Examples of data that I plan to collect is through interviews, college lessons, images of areas around the farm and UK statistics from trustworthy websites. I will record my findings and collate them into my project All of this data is crucial in helping me compare the two aspects of my initial question.

## Go to LAMMA and speak to specialists

In January I will have the opportunity to go to LAMMA which is a predominantly agricultural machinery show that also has a range of other agriculture items such as handling systems and personal protective clothing. There are specialists on most stands, which will give me the opportunity to talk to a range of different people and get a range of different statistics and opinions. I will be able to find out how the machinery or other item at a stand could benefit an aspect of my initial question. Prior to visiting LAMMA I will have to prepare questions that I want to ask and decide the type of stands that I want to visit in order to maximise the amount of data that I can collect over the day. I will also make a questionnaire with a few tick box questions that I can ask random people at the event to complete. This will give me huge range of results from people who work in several different areas of the agricultural industry.

## Reflect and analysis comments from LAMMA specialists

After attending LAMMA I will have a huge range of data that I will need to organize and decide whether it is relevant to my project. I will use a graph to help me match up facts, statistics and opinions that were repeated at different stands, which will give me a wider range of samples to come to a conclusion from. This process will probably take me quite a while so on my Gantt chart I have planned to give myself two months to complete this section.

## Analysis and compare all data

I plan to analyse data throughout the entire year as my project progresses while constantly linking my findings back to my initial question. However, I know that once I have organized my data from LAMMA I will need to incorporate it with all of my other data from other sources. I plan to mainly be doing this at the same time as coming to my final conclusion because my data will have the biggest influence on my decision.

## Come to an overall conclusion

This is probably going to be the hardest part of my project, which is why I have given myself three months to work on it. I need to make a well informed, justifiable decision answering my initial question from the data that I have collected over the year. In my conclusion I will give details of what I have learnt, reflect on what I could of done better and explain what I would change if I did the project again.

## Time required

I will log all the hours that I work on the assignment on including times that I have interviewed people, collected data as well as writing up my comparison on a simple graph. It will take time in my free periods and after college hours to interview college dairy staff and lecturers to help me collect data. I will have to visit the small family run dairy farm on my days off to interview the farm owner. I will also spend my free periods, evenings and weekends writing the project up and comparing data.

## Resources required and justification of those selected based on suitability, availability, and cost

| RESOURCES | Suitability | Availability | Cost |
|---|---|---|---|
| **People** (Farmers, Contractors, Lecturers) | Talking to farmers will broaden my knowledge on social factors e.g. work life balance. Farm managers/ owners will be able to broaden my economic knowledge on the farm business. | I can ask the college dairy farm staff and the farm owner of the small family dairy farm that I help on as well as college lectures in class or on teams/ email. | Fuel cost to get to college and the two farms |
| **Time** (How much time will it take, when are you going to complete this within your working week) | I will use my free periods and after college hours to talk to college dairy staff and my lecturers as well as some evenings to draft up interview questions.<br>I will complete other research and gather my findings in my specialist, project lessons and in my own time at home. | I will need to spend several hours a week over the year to gather information. Nearer to the deadline I will spend several hours a day writing all of my findings up in a conclusion. | N/A |

| | | | |
|---|---|---|---|
| **Buildings** (Where will you complete this, what arrangements or support do you need) | I will require the internet to research data and get a range of opinions.<br>I will need somewhere to charge my laptop when online researching and writing up. | The college library and my house are good locations with internet to research and write up my project.<br>I will learn the theory of how to collect and analysis data in my specialist project lessons | Fuel cost to college and the small family run dairy so that I can access taught lessons and collect data |
| **Equipment** (What equipment will you need) | I require my car to drive to college and to the small family dairy farm<br>I will need my laptop to write my findings on and put them into graphs.<br>I will need a notebook and pen so that I can take notes when interviewing people | I already own everything that I need | General car upkeep costs e.g. fuel, services, insurance, tax<br>General laptop costs e.g. charging, fixing damage |
| **Animals** (Do you need to use animals? what animals from which farm) | I will use the cows from the college dairy and from the small family dairy. These are a mixture of mainly Holsteins and Ayrshire's. | I can easily access the cows at the small family dairy farm because I am frequently there, and I can access the cows at the college dairy in my free periods of after college hours | Fuel cost to get to college and the small family farm |
| **Materials** (Make a list of what materials you will need or use) | I will require…<br>-Notebook<br>-Laptop<br>-Pens<br>-Car | These are all easily accessible as I already own them | General laptop and car costs<br>Initial cost of notebook and pens |
| **literature and media eg internet, trade magazine** | -AHDB articles<br>-Farmers Weekly<br>-National Farmers union<br>-Government legislations | These are all accessible online.<br>I am part of the NFU student programme, which means that I receive a copy of the magazine every month. I can use articles from this to collect data and a range of opinions | General laptop upkeep costs |
| **IT applications and budget.** (What ICT resources will you use and do you have a budget) | I will be using my Laptop and my phone to collect and write up data | I do not have a budget as I already own a laptop and a phone.<br>My laptop and my phone are both easily accessible as I normally have one or both on me. This will make recording data easier. | General laptop and phone upkeep costs |

## Possible disruptions to plan e.g. illness, IT problems, resource problems, cost

There are a number of disruptions that could occur while working on my specialist project. For example, IT problems such as Wi-Fi not working or my laptop breaking would prevent me getting a large amount of research and data. If my laptop broke, I may have to share a laptop or buy a new one. This will slow down how much work I can get done over this time. If the farm staff are unable to be interviewed due to how busy they are I will be prevented from getting personal experiences which will limit my research into social factors. Another disruption would be if the farms have not kept their records organized or are unwilling to show me because I would be missing information for my research into the economic side of my evaluation. I may face an injury over the year preventing me from driving. This would prevent me collecting data from the farms as I would not be able to drive to them however, I could collect online data as I recover.

Some ways that I could reconcile these disruptions are using college laptops and Wi-Fi if I do not have access to my own, using magazines such as Farmers Weekly to get personal experiences from people within the industry and look at general UK farm economic statistics for both types of farms if the farm workers are unable to share this information with me. Finally, if I am unable to drive temporarily, I could get a lift to college with a friend and I could either walk or get a lift to the small family dairy farm.

## Contingencies

A contingency is a future event or circumstance that cannot be predicted with certainty such as a war or government changes. Wars will affect the demand and price of certain products. Normally the biggest cost affected by wars is feed or fertilisers. This affects dairy farms because they will have to spend more money on feed due to there being less available. New government legislations will affect milk contracts and production requirements, which could be more expensive for the farm.

# 309 Undertake a Specialist Project in the Land-Based Sector Task 3

## *Health and safety requirements and legislations*

Health and Safety is an essential part of farm business management and must be prioritized when I am completing my project. As I am going onto different farms, I will wear different overalls at each of them and dip my boots in the foot dip for workers to prevent me spreading diseases between the farms. I will also wear a high vis when I am walking around the farms. This will help me to be seen by workers on the farm. This is particularly important when there are moving machines in the same location as me. PPE such as steal toe boots, dust mask, goggles and gloves will protect my body from harmful substances getting onto my skin. I will make sure to wash my hands properly before leaving the farm or after doing an activity that has made my hands dirty. As I will be in close contact with cattle, I have had training to ensure that I know how to work with cattle. This training has taught me to look out for signs of aggression or unusual behaviours in cows. With this knowledge I will know when to move away from cattle if they are likely to cause me harm. I have completed a risk assessment listing some of the possibly risks that could occur when I visit the farm. This includes control measures that will minimize the risks. Risk assessments are essential before performing a range of tasks on farms because they provide a careful examination of what could cause harm to people when doing a specific task. Both farms must have correct storage of chemicals in line with Control of Substances Hazardous to Health Regulations 2002 (COSHH). Both farms should be kept tidy with the ground free of hazards to minimize the risk of trips and slips. Signs must be placed around the farm to alert staff and visitors of the hazards in the area that they may encounter. An example of this would be 'machines in operation' signs. It is unlikely that I will be asked to work at height but if I do, I will make sure that I abide by the working at height regulations 2005.

As part of my project, I will compare the social factors on the two farms. I will look to see if both farms are abiding with the agriculture (Safety, Health and welfare Provisions) Act 1956 to help me come to a conclusion on this. I will also look at how employers are following the Health and Safety at work act 1974. I will also look at how machinery is being used on the farms. The Provision and Use of Work Equipment Regulations (PUWER) 1998 ensures that all equipment used at work is suitable, properly maintained, and only operated by trained individuals. I will ask workers if they have had the correct training to operate these machines as well as check that the machines are being maintained correctly.

Section:

# Generic Hazard & Risk Assessment

***Operation /Task being assessed:*** **Looking at animal welfare on small family run dairy farm**

***Location:*** **Dandy Ford Dairy, Romsey**

| ***Assessor name*** | Emelia O'Connell | ***Date completed*** | 16/2/25 | ***Review date*** | 16/2/26 |
|---|---|---|---|---|---|

| DEFINE THE POTENTIAL HAZARD OR ACTIVITY | DEFINE THE HARM OR CONSENQUNCES | STAFF | LEARNER | VISITOR | OTHER | STATE THE ACTUAL CONTROL MEASURES IN PLACE TO REDUCE THE RISK | SEVERITY | | FREQUENCY/ LIKELYHOOD | | RISK RATING |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MACHINERY OPERATIONS<br><br>FIRE RISK | Being hit/ crushed/ run over by machinery. Lead to injury or death. Time off work | X | X | X | X | Wear high vis when on the farm so that machinery operators can see everyone<br><br>Keep machinery speed low<br><br>Only use a guarded PTO | 7 | | 1 | | 7 |
| TRANFER OF GERMS THROUGH POOR HAND HYGINE<br><br>IMPACT INJURIES FROM LIVESTOCK<br><br>LIVESTOCK BITES OR KICK INJURIES<br><br>FOOT DIP CHEMICALS<br><br>COSSH CABINET CHEMICALS<br><br>ZOONOTIC DISEASES | Loss of life (livestock and humans). Injuries from flames and smoke. Future lung conditions. Time off work | X | X | X | X | Have a fire safety procedure that all staff and visitors are aware of<br>Store combustible and flammable materials correctly | 5 | | 1 | | 5 |
| | Visitors and staff are unable to wash their hand before they eat so they pick up diseases from livestock. Time off work | X | X | X | X | Have a clean allocated area where people can wash their hands with hot water and soap. | 3 | | 2 | | 6 |
| | Being crushed. Injury or loss of life. Time off work | X | X | | | Never let workers go in livestock pens by themselves<br>Have escape areas in pens for workers to use<br>Train workers to notice signs of aggression<br>Only trained staff can go in pens with livestock | 7 | | 1 | | 7 |
| | Injury or infection. Time off work | X | X | | | Only trained staff can go in pens with livestock<br>Ensure all bites are cleaned immediately and check by a doctor<br>Train workers to notice signs of aggression<br>Have escape areas in pens | 3 | | 1 | | 3 |
| | Ingesting chemicals. Lead to | X | | | | Wear the correct PPE when using the foot dip chemicals | 5 | | 1 | | 5 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | death or serious health issues. Time off work | | | | | | | | | | |
| | Chemicals getting on skin cause rashes. Ingested chemicals lead to death or serious health injury. Time of work | X | | | | Store chemicals correctly in alignment with legislation<br>Wear the correct PPE when handling chemicals | 3 | | 2 | | 6 |
| | Serious health issues. Lead to death. Time off work | X | X | X | X | Isolate and cull livestock with zoonotic diseases.<br>Ensure all staff and visitors are aware of animals with zoonotic diseases.<br>Disinfect barn and transport vehicles once the animal has been moved out<br>Use separate cleaning tools in the isolation barn | 3 | | 1 | | 1 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

USE KEY BELOW TO RISK RATE THE SEVERITY AND FREQUENCY –

| **Severity Rating** (How severe is it if it happened) | **Frequency Rating** (how likely is it to happen) | **Risk Rating** (multiply the severity by the frequency to get a risk rating number) |
|---|---|---|
| 1. Trivial injury | 1. Improbable – Unlikely though conceivable | 1 – 4 Acceptable risk. No remedial action necessary |
| 2. Minor injury, requires first aid | 2. Possible | 6 – 8 Further control measures to be evaluated and implemented |
| 3. Major injury, disabling or disease | 3. Occasional | 9 – 16 Activity not to take place until a full review can be carried out, the risk has been reduced, control measures are in place and a new assessment has been completed |
| 4.Fatality | 4. Regular | |

Where the risk rating ***exceeds 6 for any component part of the activity*** specified additional control measures must be introduced to reduce the hazard or risk. The following measures ***are considered necessary and are to be implemented*** whenever the activity is carried out

| Item from overleaf | Additional control measures | Review Date |
|---|---|---|
| MACHINERY OPERATIONS | Increase staff training<br>Limit how many vehicles are being used at the same time | 16/2/25 |
| IMPACT INJURIES FROM LIVESTOCK | Put escape access areas in all livestock pens<br>Workers keep their phone on them at all times so that they can make emergency phone calls | 16/2/25 |

**Declaration** (***Note:*** A ***'specific' risk assessment linked to generic*** is to be completed (as appropriate), ***each time the activity is undertaken*** to identify any factors ***which may increase*** the potential hazards or risks previously identified.)

I have carried out this '***generic' hazard and risk assessment*** on the date as specified on page 1. I consider that the hazards and risks identified are acceptable providing that the control measures (and if specified any additional control measures) are implemented.

| | | | | | |
|---|---|---|---|---|---|
| **Name/designation of person completing this form:** | A. G. O'Connell | **Signature:** | A G O'Connell | **Date:** | 16/2/24 |
| **Name of departmental verifier:** | | **Signature:** | | **Date:** | |

# *List of Personal Protective Equipment (PPE)*

*Personal protective equipment is essential on farms and should be worn as directed in the Personal Protective Equipment Regulations (1992)*

Sturdy boots with sole plate, toe caps and oil resistant soles.
Wellies
Waterproof clothing
Warm clothing
Suncream
High visibility jacket
Dust/ chemical mask
Overalls
Eye protection
Ear protection
Gloves

# *Reasons for each item of PPE*

**Sturdy boots with sole plate, toe caps and oil-resistant soles.**
These are worn to protect the feet and ancles from twisting and turning on uneven ground. The sole plate protects again sharp objects passing up through the ground. The toe cap protects the toes from impact. Oil-resistant soles stop the soles from corroding if worn where oil is present on the ground.

**Wellies**
Wellies are to be worn to protect the feet and lower legs from getting wet. Any part of the body which is wet for a prolonged period can make a person very cold. This can lead to lack of concentration or in an extreme situation hypothermia. It is very important that wellies are worn to protect against the wet and not worn around the farm unless they have the additional protection listed above.

**Waterproof clothing**
Like wellies waterproof clothing protects against the wet. This can be operations like washing down as well as working outside in the rain. As with wellies it is unsafe to allow the body to become wet and cold.

**Warm clothing**
Farming is a predominantly an outside job. It is therefore essential warm clothing is worn during periods of colder weather. Warm clothing also includes a hat and gloves. Staying warm prevent feeling unwell and potentially suffering from hypothermia.

**Lightweight breathable clothing**
By contrast to warm clothing, it is essential that farm workers wear clothing in the summer which prevents them from overheating. It is very important that this clothing remain appropriate for the task. Shorts and short sleeve tops must only be worn if appropriate to do so. Full length breathable clothing is more suitable for most farm tasks to protect the skin. Hats should also be worn to protect against sunstroke.

**Suncream**

An appropriate factor cream should be allied to the exposed areas of the skin to protect against burning by the sun. Long sleeves and a hat should be used as the primary protection and cream only used where a physical covering is not possible.

**High visibility jacket**
Where it is important that a farm worker can be seen a high visibility jacket must be worn. For example, when working in and around moving machinery. It is important that any high visibility clothing worn is clean and in good condition.

**Dust/ chemical mask**
For some tasks the farm worker may be required to handle dust or chemicals. Where this is the case a well-fitting mask with the correct filter should be worn.

**Overalls**
Overalls are required for a range of farm tasks which are particularly dirty or dusty. They provide protection for the skin and also protect day clothing worn underneath.

**Eye protection**
This is an essential item of PPE for when a farm worker is undertaking an activity which could cause damage to the eyes.

**Ear protection**
Ears are sensitive to noise it is therefore essential to wear eye protection when undertaking a noisy activity.

**Gloves**
Gloves should be worn to undertake many different activities, and the right type of gloves should always be used. Think gloves should be worn for manual task such as lifting and shifting to protect the hands from cut and abrasions. Additionally, rubber gloves should be worn when handling chemicals to prevent the hands from burns, irritation or straining.

**Harnesses**
If working at height is required a farm worker must ensure they are appropriately secured to prevent falling. The harness must be strong, in proper working condition and support the body in a way that does not cause further injury if a fall does occur.

**Gas monitor**
These are used when a farm worker needs to enter a confined space. Note only those with confined space training must enter a confined space.

**Life jacket**
For use when working in or around water. The jacket should be fitted with automatic inflation valves which are triggered through contact with water. The jacket will protect from drowning.

To assistant in selecting the appropriate PPE for any activity the following guidance should be used. Some PPE is a legal requirement it is therefore also essential to follow the appropriate legislations and regulations.

**List of guidance**

- The Personal Protective Equipment at Work Regulations 1992 (as amended): Guidance on Regulations – Health and Safety Executive.

- Using personal protective equipment (PPE) to control risks at work – Health and Safety Executive.
- Working near water – Health and Safety Executive.
- Health and safety in agriculture – Health and Safety Executive

**List of legislation**

- The Personal Protective Equipment at Work Regulations 1992 (PPER 1992) and its subsequent amendment in 2022
- Control of Substances Hazardous to Health Regulations 2002 (COSHH).
- Working at height regulations 2005.
- The Confined Spaces Regulations 1997

# *Relevant regulations, legislation and codes of practice*

One of the aims of my project is to look at the animal welfare on both farms and the legislations supporting this. Understanding the Animal welfare act 2006 and Welfare of Farmed Animals Regulations 2007 will be crucial in completing this aim. These legislations are in place to protect animals' welfare by protecting them from harm and cruelty. They also ensure that animals are being farmed in similar systems all over the UK. If farms fail to meet these legislation standards they will face prosecution.

The Agriculture Act 2020 focuses on protecting the environment, food security, animal welfare and marketing and trading standards. There are a set of restrictions that farmers must abide by to ensure that these are being maintain on their farm and in their supply chain.

The Health and Safety at work act 1974 protects workers by protecting them from dangers in the workplace. I will be looking at how workers and employers abide by this regulation. Some ways that I will be able to identify if they are not following this legislation is if workers are not wearing the correct PPE for the task that they are doing. I can also look at training records to ensure that workers are trained to use specific equipment and complete specific tasks.

Manual Handling Operations Regulations 1992. This legislation relates to manual handling tasks such as lifting, pushing, pulling and carrying. The legislation is in place to keep workers safe from manual handling injuries. Employers must risk assess tasks that involve manual handling to ensure that they are safe for employees to complete. Workers must abide by health and safety rules and their training.

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013. This requires workers to report any serious injuries, diseases or dangerous occurrences that they have encountered or received at work. The purpose of this legislation is to eliminate these risks occurring again in the future, ensure legal compliance and enable investigations.

# *Log of actions*

As you can see in my log of actions below, I managed to complete the majority of my tasks on the days that I had set out to do them. There were a few situations such as on 07/11/24 (first visit to small family run dairy farm) when unforeseen circumstances meant that I had to change my initial completion date to fit in with the farm owner. When situations like this occurred during my project, I would complete a research task that I could do from home instead as shown below. When planning my project, I made sure that all my deadlines were early enough to give me enough time to complete tasks afterwards if I was unable to reach the deadline due to a change in situation.

| Start date | Activity | Completion date | Complications |
|---|---|---|---|
| 03/10/24 | Researched gross margin data from dairy farms across the UK | 03/10/24 | None |
| 07/11/24 | First farm visit to small family run dairy farm | 11/11/24 | I was originally supposed to visit the farm on the 7th however the farm owner had a family emergency, so we had to push the visit back 4 days |
| 07/11/24 | Research animal welfare legislations | 07/11/24 | None |
| 13/12/24 | Interview with college dairy staff worker | 13/12/24 | We had to move the interview to the end of the college day because my lesson before lunch overran so I did not have enough time for the interview in my lunch break as planned. |
| 06/1/25 | Interview with small family run dairy farm owner | 06/1/25 | None |
| 10/3/25 | Research environmental schemes that apply to dairy farms | 17/3/25 | This took me a week as there were more schemes for me to read about than I had anticipated. |
| 06/4/25 | Take pictures of welfare facilities on college dairy farm | 06/4/25 | None |
| 15/4/25 | Take pictures of welfare facilities on small family run dairy farm | 15/4/25 | This took all afternoon when I had intended for the task to only take a few hours because the farm owner was on another farm with the keys to the farmhouse, so I had to collect them before being able to start the task. |
| 03/5/25 | Research the milk contract that the college dairy farm sells to | 04/5/25 | This took me two days because I spent a day researching on the farm and a day researching online. |
| 07/5/25 | Final visit to college dairy farm | 07/5/25 | None |

# *Monitoring of progress against the action plan*

**Action plan for aim 1 (Compare cost inputs and outputs using gross margins)**

**Step 1: Farm visits**

- **Start Date**: October 24, 2024
- **End Date**: April 24, 2025
- **Resources Needed**: Car, PPE, camera, notepad and pen
- **Status**: Completed

Over the year I will regularly visit farms to collect their purchase and sales data. I will do this by taking pictures of the record in the farm office (with farm managers permission) so I will need a camera so that I can look at these records again at home. I will need my car to drive to the farm. I will also need a notepad and pen so that I can record notes or additional data.

**Step 2: Compare gross margins of the two farms**

- **Start Date**: October 10, 2024
- **End Date**: April 10, 2025
- **Resources Needed**: Calculator, notepad and pen, laptop
- **Status**: Completed

After collecting purchase and sales records from both farms I will be able to calculate the gross margins of these farms using a calculator. I will use my computer to input my findings onto a table, which will make it easier for me to compare.

**Step 3: Use websites to get gross margins from commercial dairy farms across the UK**

- **Start Date**: October 10, 2024
- **End Date**: April 10, 2025
- **Resources Needed**: Laptop, internet
- **Status**: Completed

Using my computer, I will research average gross margins across dairy farms in the UK. I will use websites such as AHDB and Farmers Weekly as I know that these results are going to be reliable.

**Step 4: Compare the gross margins of the two farms and commercial gross margin results.**

- **Start Date**: April 10, 2025
- **End Date**: May 1, 2025
- **Resources Needed**: Calculator, laptop
- **Status**: Completed

Finally, I will compare all my results to see which type of farming system has the greatest gross margins. This will help me better understand the economics of the two different types of farms.

**The whole project action plan timeline**

- **October 2024**: Initial question
- **October- November 2024**: Decide and research aims and find out the best way to collect data from them
- **December 2024**: Complete project proposal
- **November 2024- May 2025**: Collect data
- **January 2025**: Go to LAMMA and speak to specialists
- **February- March 2025:** Reflect and analysis comments from LAMMA specialists
- **December- May 2025:** Analysis and compare all data
- **April- June 2025:** Come to an overall conclusion

# *Annual deadline calendar*

Highlighted on the calendar below are all the deadline dates for my project throughout the entire academic year. The deadline dates that are highlighted in light grey were met and the deadline dates that are highlighted in light pink were not met.

## Academic calendar 2024/25 UK

Calendarpedia.co.uk — Your source for calendars

| 2024 | | | | 2025 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| September | October | November | December | January | February | March | April | May | June | July | August |
| 1 Su | 1 Tu | 1 Fr | 1 Su | 1 We New Year's Day | 1 Sa | 1 Sa | 1 Tu | 1 Th | 1 Su | 1 Tu | 1 Fr |
| 2 Mo 36 | 2 We | 2 Sa | 2 Mo 49 | 2 Th 1 | 2 Su | 2 Su | 2 We | 2 Fr | 2 Mo 23 | 2 We | 2 Sa |
| 3 Tu | 3 Th | 3 Su | 3 Tu | 3 Fr | 3 Mo 6 | 3 Mo 10 | 3 Th | 3 Sa | 3 Tu | 3 Th | 3 Su |
| 4 We | 4 Fr | 4 Mo 45 | 4 We | 4 Sa | 4 Tu | 4 Tu | 4 Fr | 4 Su | 4 We | 4 Fr | 4 Mo 32 |
| 5 Th | 5 Sa | 5 Tu | 5 Th | 5 Su | 5 We | 5 We | 5 Sa | 5 Mo Early May Bank Hol. | 5 Th | 5 Sa | 5 Tu |
| 6 Fr | 6 Su | 6 We | 6 Fr | 6 Mo 2 | 6 Th | 6 Th | 6 Su | 6 Tu 19 | 6 Fr | 6 Su | 6 We |
| 7 Sa | 7 Mo 41 | 7 Th | 7 Sa | 7 Tu | 7 Fr | 7 Fr | 7 Mo 15 | 7 We | 7 Sa | 7 Mo 28 | 7 Th |
| 8 Su | 8 Tu | 8 Fr | 8 Su | 8 We | 8 Sa | 8 Sa | 8 Tu | 8 Th | 8 Su | 8 Tu | 8 Fr |
| 9 Mo 37 | 9 We | 9 Sa | 9 Mo 50 | 9 Th | 9 Su | 9 Su | 9 We | 9 Fr | 9 Mo 24 | 9 We | 9 Sa |
| 10 Tu | 10 Th | 10 Su | 10 Tu | 10 Fr | 10 Mo 7 | 10 Mo 11 | 10 Th | 10 Sa | 10 Tu | 10 Th | 10 Su |
| 11 We | 11 Fr | 11 Mo 46 | 11 We | 11 Sa | 11 Tu | 11 Tu | 11 Fr | 11 Su | 11 We | 11 Fr | 11 Mo 33 |
| 12 Th | 12 Sa | 12 Tu | 12 Th | 12 Su | 12 We | 12 We | 12 Sa | 12 Mo 20 | 12 Th | 12 Sa | 12 Tu |
| 13 Fr | 13 Su | 13 We | 13 Fr | 13 Mo 3 | 13 Th | 13 Th | 13 Su | 13 Tu | 13 Fr | 13 Su | 13 We |
| 14 Sa | 14 Mo 42 | 14 Th | 14 Sa | 14 Tu | 14 Fr | 14 Fr | 14 Mo 16 | 14 We | 14 Sa | 14 Mo 29 | 14 Th |
| 15 Su | 15 Tu | 15 Fr | 15 Su | 15 We | 15 Sa | 15 Sa | 15 Tu | 15 Th | 15 Su | 15 Tu | 15 Fr |
| 16 Mo 38 | 16 We | 16 Sa | 16 Mo 51 | 16 Th | 16 Su | 16 Su | 16 We | 16 Fr | 16 Mo 25 | 16 We | 16 Sa |
| 17 Tu | 17 Th | 17 Su | 17 Tu | 17 Fr | 17 Mo 8 | 17 Mo 12 | 17 Th | 17 Sa | 17 Tu | 17 Th | 17 Su |
| 18 We | 18 Fr | 18 Mo 47 | 18 We | 18 Sa | 18 Tu | 18 Tu | 18 Fr Good Friday | 18 Su | 18 We | 18 Fr | 18 Mo 34 |
| 19 Th | 19 Sa | 19 Tu | 19 Th | 19 Su | 19 We | 19 We | 19 Sa | 19 Mo 21 | 19 Th | 19 Sa | 19 Tu |
| 20 Fr | 20 Su | 20 We | 20 Fr | 20 Mo 4 | 20 Th | 20 Th | 20 Su | 20 Tu | 20 Fr | 20 Su | 20 We |
| 21 Sa | 21 Mo 43 | 21 Th | 21 Sa | 21 Tu | 21 Fr | 21 Fr | 21 Mo Easter Monday 17 | 21 We | 21 Sa | 21 Mo 30 | 21 Th |
| 22 Su | 22 Tu | 22 Fr | 22 Su | 22 We | 22 Sa | 22 Sa | 22 Tu | 22 Th | 22 Su | 22 Tu | 22 Fr |
| 23 Mo 39 | 23 We | 23 Sa | 23 Mo 52 | 23 Th | 23 Su | 23 Su | 23 We | 23 Fr | 23 Mo 26 | 23 We | 23 Sa |
| 24 Tu | 24 Th | 24 Su | 24 Tu | 24 Fr | 24 Mo 9 | 24 Mo 13 | 24 Th | 24 Sa | 24 Tu | 24 Th | 24 Su |
| 25 We | 25 Fr | 25 Mo 48 | 25 We Christmas Day | 25 Sa | 25 Tu | 25 Tu | 25 Fr | 25 Su | 25 We | 25 Fr | 25 Mo August Bank Holiday |
| 26 Th | 26 Sa | 26 Tu | 26 Th Boxing Day | 26 Su | 26 We | 26 We | 26 Sa | 26 Mo Spring Bank Holiday | 26 Th | 26 Sa | 26 Tu 35 |
| 27 Fr | 27 Su | 27 We | 27 Fr | 27 Mo 5 | 27 Th | 27 Th | 27 Su | 27 Tu 22 | 27 Fr | 27 Su | 27 We |
| 28 Sa | 28 Mo 44 | 28 Th | 28 Sa | 28 Tu | 28 Fr | 28 Fr | 28 Mo 18 | 28 We | 28 Sa | 28 Mo 31 | 28 Th |
| 29 Su | 29 Tu | 29 Fr | 29 Su | 29 We | | 29 Sa | 29 Tu | 29 Th | 29 Su | 29 Tu | 29 Fr |
| 30 Mo 40 | 30 We | 30 Sa | 30 Mo 1 | 30 Th | | 30 Su | 30 We | 30 Fr | 30 Mo 27 | 30 We | 30 Sa |
| | 31 Th | | 31 Tu | 31 Fr | | 31 Mo 14 | | 31 Sa | | 31 Th | 31 Su |



# *Remedial actions taken to remain on schedule*

Remedial actions are actions that are taken to effect long term restoration. I must take remedial actions to complete aim 6 (Look at the markets that both farms sell to and the price that they sell their milk) because I was unable to find out where the college dairy farm sell their milk to. This is due to having limited time for the interview as the worker had to feed the calves, so he did not have time to answer all my questions. We have arranged another interview so that I can ask my final questions about the farm's milk sales. This will allow me to complete aim 6.

**Action plan for aim 6 (Look at the markets that both farms sell to and the price that they sell their milk)**

**Step 1: Second interview with college dairy worker**

- **Start Date:** April 15, 2025
- **End Date**: April 15, 2025
- **Resources Needed**: Car, notepad and pen
- **Status**: Incomplete

I will ask the college dairy worker the remainer of my interview questions focusing on where the college dairy farm supply their milk.

**Step 2: Research the milk contract and find out how much the milk sells for**

- **Start Date**: April 16, 2025
- **End Date**: April 20, 2025

- **Resources Needed**: Internet, laptop
- **Status**: Incomplete

After discovering where the college milk is sold, I will be able to research the company and see the prices that they buy their milk at. I will do this through the company's websites so I will need my laptop and the internet.

**Step 3: Compare the price that the milk is being sold for on each of the dairy farms.**

- **Start Date**: April 20, 2025
- **End Date**: April 25, 2025
- **Resources Needed**: Computer, internet
- **Status**: Incomplete

After completing the previous two steps I will know the price that the milk is sold at from the college dairy farm. I already know the price the small family run dairy farm sell their milk for because from my interview with the farm owner. Using this information, I will be able to compare the two prices and review why they are different.

**309 Undertake a Specialist Project in the Land-Based Sector**

**Task 4**

# Introduction

The aim of my project was to evaluate the economic, environmental and social contrasts between a small family run dairy farm and a commercial dairy farm. I have managed to collect a large range of data that has provided varied results across the three different aspects in both types of farms.

Economic – I have been researching gross margins, milk yields, expenditures and wages to help me decide the type of farm that is more economically sustainable. I have also looked at the job security from a financial perspective for farm workers on the two different types of farms.

Environmental – I have looked at the impact that both types of farms have on the environment from their emissions, energy use, amount of waste, renewable energy sources, amount of permeable surface, recycling and greenhouse gas emissions. I have also looked at the biodiversity on the different types of farms. I have researched environmental grants that farms can receive and how these grants suit the two different types of farms.

*Social* – I have researched the impact of working on the two different types of farms and how this job affects workers lifestyles. I have also looked at the measures in place on each farm to follow legislation and how this impacts workers. Finally, I have looked at the opportunities that both farms bring into the local area and how this impacts the community surrounding the farms.

# Project results/findings

## How was the project conducted?

I think the way that my project was conducted was effective as my planning and organization allowed me to get everything done in a suitable timeframe. I had also planned time for disruptions, and I am grateful that I did because there were a few disruptions on the small family run farm that caused a slight delay in data collection. A few times I had to complete several days tasks in one farm visit.

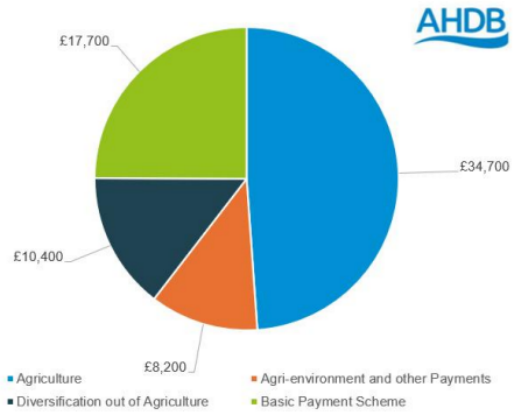
## Project results- Economic

Throughout my research I began to realise that the expenditure on a commercial dairy farm is far greater than on a small family run dairy farm. This made me think that the profits on a small family run dairy farm would be greater than a commercial dairy farm. However, I was wrong. As I was analysing my final data from the different types of farms, I realised that commercial farms make a greater profit even with these high expenses. One of the reasons for this is due to the number of cows that commercial dairy farms have producing high yields (30-40 litres a day). These cows are bred to produce very high daily yields, whereas cows on small family run dairy farms are normally medium or low yielders (5-20 litres per day). This is because the business

does not have the money to buy high yielders when they are starting up the farm. Small family run dairy farms have less cows to milk, which saves them money on labour, feed, bedding, and vet med bills. However, this also means that they are getting less product (milk) which is their main source of income.

During my research I found a challenge that commercial dairy farms face. This is the uncertainty of their milk price. An article from the National Farmers Union (Dairy contract legislation – what does it mean for dairy farmers?) said that "at times of pressure, when the market is low or a business unstable, purchasers have the ability to change contract terms and pricing mechanisms, even, in some instances, to introduce retrospective penalties and price cuts without negotiation." This causes a constant financial uncertainty for commercial dairy farms, which can make financial planning very difficult because the future milk price is unknown. I discovered that majority of small family run dairy farms set their own milk price per litre. This removes that uncertainty because they are able to determine the price that the milk is sold at. Therefore, if production prices increase, farm owners are in the position to increase the price that they sell their milk at. After taking an average from several different small family run dairy farms, I discovered that the average milk price per litre on these types of farms is £3 a litre.

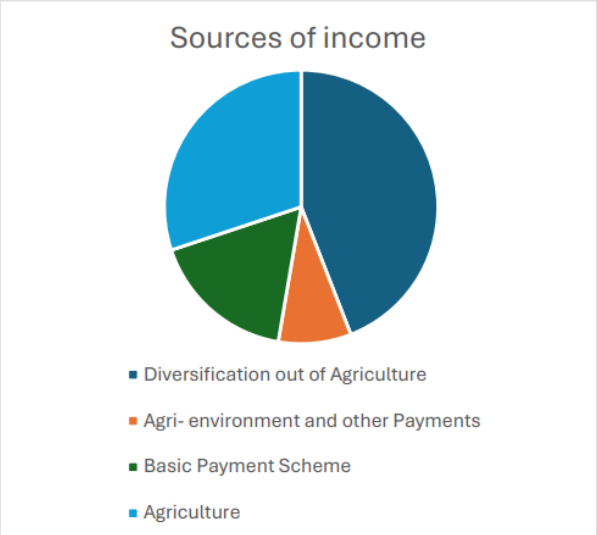
Below is a pie chart from the Agriculture and Horticulture Development Board (Average Farm Business Income for the dairy sector forecast to rise for 2024/25) showing the different sources of income on commercial dairy farms. As seen, there is a need for commercial dairy farms to diversify away from agriculture in order to keep the farm afloat.




Source: Defra

Although this diversification percentage seems high, I made my own pie chart using data from a small family run dairy farm to help me compare them. As seen in my pie chart, a larger proportion of income comes from diversification out of agriculture on small family run dairy farms. I found that farm shops and opening to the public are the most common form of diversification on these types of farms. Another piece of evidence that backs up this conclusion comes from Agriculture and Horticulture development Board (Key comparisons between top and bottom performing dairy farms) saying "The breakdown of the farm's agricultural activities into different enterprises shows that top performers are significantly more specialised, with the

percentage of farming output from dairy at just over 75%, compared with 68% for the bottom performers".




## Project results- Environmental

Commercial dairy farms create a bigger impact on the environment due to the amount of greenhouse gasses, methane and ammonia emissions that are released during production. However, commercial farms have more space that they can utilise to protect the environment. There are several environmental grants that are only accessible to commercial dairy farms due to the amount of space that the grants require. Small family run dairy farms often apply for small environmental grants, but they do not normally have much spare space that they can use for these. Small family run dairy farms are more likely to receive environmental grants for hedgerows or trees that are already on their land instead of planting new crops. The Agriculture and Horticulture Development Board (Key comparisons between top and bottom performing dairy farms) explains what these grants can offer and how different farms will be able to use them in the following sentences. "Some of the (higher value) options that are becoming available in agricultural policy schemes offer a generous and guaranteed income in exchange for land use change for a minimum period. Other actions are simply to reward good practice. Many (good) farmers will be undertaking these actions already so will be able to receive the support with no change to their farming systems."

Environmental grants that are currently available for farms from the gov.uk website:

- Sustainable Farming Incentive
- Countryside Stewardship Higher Tier (CSHT)
- Landscape Recovery
- Farming Equipment and Technology Fund (FETF)
- Water Management grant (round 2)
- Slurry Infrastructure grant (round 2)
- Improving Farm Productivity grant (round 2)

- Improve animal health and welfare
- Calf Housing for Health and Welfare grant
- Creating woodland

Alongside researching environmental grants that dairy farmers can get involved in, I also looked at ways that dairy farms are already helping the environment. Agriculture and Horticulture Development Board (Dairy: Environment) informed me that "43% of dairy farmers implement or use renewable energy and 73% of dairy farms implemented nutrient management plans". This shows that dairy farmers are making a positive difference on the environment despite the number of emissions that they are releasing. This statistic cannot be divided between commercial dairy farms and small family run dairy farms, so I did some additional research to see if there was a noticeable difference between the two types of farms. I visited a range of small dairy farms that are open to the public and I was able to ask about the renewable energies that they are using and their nutrient management plans. I was disheartened to discover that only one out of the six small family run dairy farms uses renewable energy sources and this only power their parlour wash. Although all the small family run dairy farms that I spoke to had nutrient management plans of some sort, but these were not often very comprehensive.

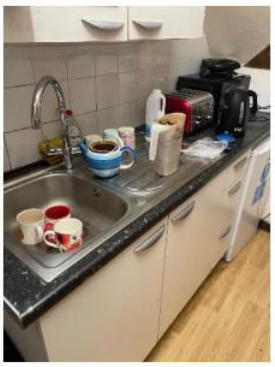
A dairy roadmap was recently released from the National Farmers Union (COP26: UK Dairy Roadmap announces net zero climate ambition) with the aim to "improve the environmental sustainability of the UK dairy sector while ensuring the continued prosperity of the industry, and the provision of safe, affordable, nutritious and sustainable climate-friendly dairy produce for years to come." This document outlines a list of commitments that the National Farmers Union have put in place to try and get the dairy industry to reach net zero carbon by 2050. This is a practical way that both types of farms are able to get involved in protecting the environment. With recommendations on "best practice and guidance on how to reduce emissions at farm level" all types of dairy farms can easily work towards this target.

## Project findings- Social

Both types of farms have positives and negatives regarding social factors. I think it is down to individuals to decide which one they would prefer. Emma Hunt, who is the owner of Dandy Ford dairy farm (small family run dairy farm) says "I love my job. I would never want to go back to working on a commercial dairy. My job fits perfectly around my family and lifestyle." My data showed me that the small family run dairy farm tend to have more flexible hours and holidays. However, not all small family run dairy farms have a reliable relief milker. Commercial dairy farms have a set number of annual leave days (normally around 21 days), which some people prefer to random flexibility.

Hours tend to be much longer on commercial dairy farms due to the number of cows that must be tended to but there are multiple workers who can share the workload. Whereas small family run dairy farms normally only have one or two workers so workers are often working on their own, which can result in loneliness and poor mental health. An article from Farmers Weekly (What makes a sustainable dairy farm – survey results) stated that the second biggest problem on dairy farms (aside from milk price) is staff recruitment or retention. This increases the likelihood of dairy farms being understaffed, which increases the workload and solo working. From this information I realised that both types of farms are vulnerable to poor mental health caused by loneliness.

I have discovered that welfare facilities such as toilets and rest areas tend to be much cleaner on a small family run dairy farm. This is because on these types of farms use the farmhouses facilities and because someone tends to be living in the farmhouse it is dry, warm and gets cleaned regularly. Whereas on commercial farms the facilities are often run down because no one uses them other than the workers and they do not have time to clean or tidy these areas.



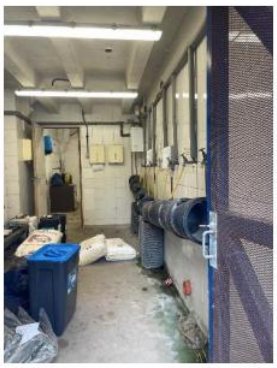


Fig 1. Small family run dairy farm welfare facilities Fig 2. Commercial dairy farm welfare facilities

A big social factor difference between the two types of farms is the impact that they have on the local community. This is because they both bring something very different into their communities. Commercial farms have more employees, which provides more jobs for the local people not only working on the farm but also as those who work connected to the farm such as agronomists, nutritionists and contractors. Commercial farms also bring negatives into the local community with the smell and noise pollution. With cows waiting to be milked during unsociable hours they can be very noisy, and this is a common complaint from residents in the area. Maxwell Timber (owner of Hill Farm Dairy), who I spoke to at LAMMA, told me that his farm gets multiple complaints a week on the noise that his cows make in early hours of the morning. He also told me that his friends on other commercial dairy farms have the same problem.

Small family run dairy farms also create noise, smell and pollution but on a much smaller scale, which causes less disruption to the local residents. These farms are unable to employee as many workers due to their size so there are very limited opportunities for employment on these types of farms. Small family run dairy farms are often open at weekends for public visitors as a way of diversifying and increasing business publicity. This provides other opportunities for the local community as it gives them a place to visit for days out. When talking to a small family run dairy farm owner, they told me that opening to the public is very popular especially amongst young families.

## Overall comparisons

| Areas were each farm scored high | Family dairy | Commercial dairy |
|---|---|---|
| Economic | Able to sell milk at a higher price per litre | High yielding cattle produce high milk yields |
| Environment | Minimal machinery usage | Increased usage of renewable energy sources |
| Social | Flexible working hours | Employment opportunities |

| Areas were each farm scored low | Family dairy | Commercial dairy |
|---|---|---|
| Economic | Unable to fund production costs through milk sales | Milk sale price is determined by an external company so finances can be difficult to predict |
| Environment | Limited space to get involved in environmental grant projects | High emissions levels |
| Social | Difficult to take time off unless there is a reliable relief milker | Challenging working pattern |

## PART 2 - Review of existing literature/information

I have used a range of different literature to complete my project. I have been using literature such as Farmer Weekly and National Farmers Union magazines to understand a range of views from different people within the dairy farming industry. This has enabled me to compare different viewpoints and given me a wider perspective on the industry. I used these magazines to understand personal experiences on dairy farms, so it did not matter how biased an article was because the article was someone's opinion. I would not use these articles if I was looking for factually correct or unbiased information however these forms of literature worked perfectly for what I required them for.

To understand the economics of the two different types of dairy farms I used books such as John Nixs Pocket book 2025 to give me reliable and up to date statistics. I needed these statistics when looking at the economic aspect of my project. I chose to collect data from a range of sources to get the most accurate conclusion on the economics of both farms. I used the Agriculture and Horticulture Development Board website to collect statistics from alongside the John Nixs pocket Book. These sources of literature are both very reliable because they must be checked by multiple specialists before they are published, and they cannot be edited once they are published. Some of my economic data came directly from the farm's results. I know that these are accurate because I collected the data from the farm records myself. I must take into account that not all farms of the same type will have the same economic results, which is why getting average results from across the UK is more beneficial.

When researching different milk prices, I looked at a range of different companies that buy milk from farmers such as Arla, Mulla and Waitrose. These websites told me about the requirements for their dairy farmers and the prices that they buy the milk at from farms. This helped me compare the costs that my two farms were selling their milk for against these big commercial companies. I used small family run dairy farm websites such as Daisy Medow Dairy to find out the price that most small family run dairy farms are selling their milk for.

I frequently used the gov.uk website during my project, which is an extremely reliable website. I mostly used this website when researching the types of environmental schemes that dairy farmers can apply for. This website is perfect for research as the website is updated and checked regularly.

I think that I used the best forms of literature throughout my entire project. I chose reliable and accurate sources when necessary and biased opinion based articles when needed. If I was to

do this project again, I would spend less time researching the different milk contracts that commercial dairy farms supply to and more time researching more small dairy farms and the prices that they were selling their milk for.

# PART 3 - Action plan and methodology

## Evaluation of action plan

I think that I organized my action plan very well because I planned contingency time to accommodate for unforeseen circumstances. There were a few times when I faced set backs when trying to complete my action plan but I managed to find other times in my project to complete those tasks. An example of when I had to change my action plan was when I had my first farm visit to the family run dairy farm. I was originally supposed to visit the farm on the 7th of November however the farm owner had a family emergency. I overcame this problem by arranging another visit to the farm on the 11th of November so that my data collection was only delayed by four days. Since I had already planned time to work on my specialist project on the 7th of November, I used this time to do online research from home. Overall, my action plan allowed me to keep on task and meet all my deadlines.

## Evaluation of methodology

Although my methodology allowed me to achieve my aims if I was to do this project again, I would write out a more detailed methodology for each of my aims. This would make my methodology clearer and easier to follow. I think that my methods were quite effective because I got all the answers that I needed to complete my project. However, I think that I could have used simpler and more specific methods that would have helped me achieve my goals quicker.

An example of when my methodology was effective was the interview section. I found this section very helpful when completing my project because I had already planned questions to ask the farm workers when I interviewed them. This meant that I did not have to come up with questions on the spot and I was able to ask farm workers from both farms the same questions. This made comparing social factors easier.

The 'Evaluate the statistics and individual factors from a small family run dairy farm and the college dairy farm and then complete an overall evaluation of them all' section of my methodology was too complicated for one task. If I did this project again, I would break this down into sections such as collect economic data from both types of farms and compare economic data from both farms. Collect environmental data from both farms and compare environmental data from both farms. Collect social data from both farms and compare social data from both farms. This would make it easier for me to complete as I would complete one section at a time instead of trying to collect all the information for all three aspects at the same time. The big disadvantage to this method is that it would take much longer and potentially be too big a burden on the farm workers.

# PART 4 - keeping to deadlines, problems and remedial actions

## Keeping to deadlines

There were a few rare occasions when I was unable to keep to deadlines due to unforeseen circumstances on the farms but majority of the time I kept to my deadlines. When I did miss my deadlines, I had to spend additional hours over the next few days working on my project to make sure that I got back on track and did not miss the next deadline.

There were two reasons that I missed my deadlines. The first reason was the daughter of farm owner of the small family run dairy farm broke her leg. This meant that the farm owner was looking after her child during the day when they would normally be at school instead of working on the farm. Due to this the farm owner had very limited time to show me around the farm and be interviewed by me. The interview date was rearranged quite a few times and ended up being after my intended date causing me to miss my deadline for the collecting data aspect of my project.

The reason that I missed my first deadline (decide my research aims) is because I only gave myself a week to do this task. That week my project supervisor was unwell so cancelled the lesson. I needed some assistance from my project supervisor to help me come up with appropriate aims that would enable me to answer my project question. Due to this I was unable to complete this section until the week after in the following lesson causing me to miss that deadline by a week.

I only missed deadlines on my project when the deadline relied on input from others and was not solely within my control.

## Problems and remedial actions

The biggest problem that I encountered throughout my project was trying to get hold of farm workers on both types of farms. I found that distractions on the farm would constantly interrupt my interviews with the farm workers despite them being scheduled in. However, this did give me an indication of the workload for each individual worker on the different types of farms which I used when comparing social factors.

The way that I overcame these disruptions was either by talking to the farm workers while they were completing a simple task or rearranging to finish the interview at another date.

# PART 5 - Strengths and areas for improvement

## Strengths

One of my strengths during this project has been flexibility.  I have needed to be flexible several times when plans have changed last minute, and I have had to work on a different aspect of my project instead of what I had intended to do. Another one of my strengths has been communication. This has allowed me to clearly explain my project to different people and have

in depth conversations with them. This was particularly helpful when I went to LAMMA (agricultural show with industry specialists) because I had limited time to talk to industry specialists, so I needed to get my questions across quickly and clearly.

## Improvements

While completing my project I have noticed my planning skills have greatly improved. When I began my project some of my deadlines that I had planned were not achievable. I realised this very quickly, so I changed them before I got behind and I planned more achievable deadlines for the rest of my project.

My weakest area in my project was collecting online data. I initially struggled to find reliable sources of information that I could compare against my own data. However, after receiving help from my project supervisors they were able to point me in the direction of some suitable websites that would provide me with the data that I needed.

The main areas that I would improve of my project would be to collect an equal amount of data from both types of farms. There were a few times when I could only collect a limited amount of data from the small family run dairy farm, but I was able to collect much more data from commercial farms. This meant that my comparison was unfair as I was comparing a smaller range of data against a larger range of data. If I was to do this project again, I would collect the same amount of data from each type of farm.

I would make these improvements by deciding to collect a certain amount of data from both farms before collecting the data. Once I reached that number, I would stop collecting data to give me a fair comparison.

# PART 6 - Conclusions

To complete my project, I had to come to a conclusion from my initial question, which was 'economic, environmental and social contrasts between a small family run dairy farm and a commercial dairy farm.' When completing my research, I realised that there are not as many contrasts between these two types of farms as I had originally expected.

Comparing the economics of a commercial farm against a small family run dairy farm led me to realise that both farms buy similar products, but it is the amount of these products that is the biggest difference between the two farms. The gross margins on commercial dairy farms are larger than on small family run dairy farms. This is because they normally have higher yielding cattle that are milked more frequently then the average small family run dairy farm herd. My research also led me to discovering the uncertainty of milk contract prices on commercial dairy farms. This is a disadvantage because their milk price can be dropped at any time making it difficult to plan the farms predicted future financial position. With small family run dairy farms setting their own milk price they remove this uncertainty. However these farms rely on customers buying the milk, which will give the farm some uncertainty. Another factor that I realised about small family run dairy farms is that they often receive more income through diversification out of agriculture because they do not receive enough money from their milk sales to support the business. The most common diversification strategy for small family run dairy farms is a farm shop, where they sell their milk and other local produce. Milk vending

machines are another common diversification strategy. Commercial dairy farms rely on diversification strategies less. However, as production costs continue to increase there will be a greater need to diversify on commercial dairy farms.

When researching environmental contrasts between the two types of farms I discovered that commercial dairy farms are a lot more polluting than small family run dairy farms due to the frequent usage of machinery and large herd sizes producing high emissions. Commercial dairy farms often receive more funding from environmental grants. This is because of the amount of land that is required to take part in these grants. For example, according to gov.uk (funding for farmers, growers and land managers) environmental grants such as the woodland creation planting grant will provide farmers with up to £30,500, which will cover all the costs to plant and maintain a woodland. However, farmers need the spare space to be able to plant a woodland. When talking to the farm owner of a small family run dairy farm, they told me that most small farms are unable to apply for many of the environmental grants because they do not have enough spare land to get involved with environmental grants. My research shows that small family run dairy farms usually apply for grants that align with nature and ecosystems that are already on their farm so that they do not have to use any additional space for these grants. This means that commercial farms are able to have a more significant impact on increasing biodiversity levels and protecting the environment. My research assured me that commercial dairy farmers are reducing their carbon footprint by increasing their renewable energy sources. Small family run dairy farms have a long way to go before they catch up with renewable energy sources because of the expensive setting up and maintenance costs. A large proportion of dairy farmers are using nutrient management plans of some scale. This is a good way to protect and keep nutrients in the soil. The National Farmers union has released a dairy roadmap with strategic plans and commitments in place to help the dairy farming industry reach net zero carbon by 2050. Included in this document are helpful tips and guidelines for both types of dairy farms.

Unlike my other two comparisons small family run dairy farms have greater social factors than commercial dairy farms. This is mainly because of the flexibility. All the small family run dairy farms that I spoke to have reliable relief milkers, which meant that they could take days off whenever they wanted. However, without a reliable relief milker this is more challenging and can lead to farmers overworking themselves. Whereas commercial farmers have set annual leave days. When researching working patterns on commercial dairy farms I realised that most dairy farmers have twelve days on, 2 days off working rotation with a very high workload due to the understaffing issue. This is a poor working pattern and often leads to high levels of mental health issues in dairy farmers. Farmers Weekly article (Poor mental health in key factor in UK dairy farmer exodus) states that there has been a 56% decline in the number of dairy farms in the UK over the past 20 years. The work life balance of the average UK dairy farmer on a commercial dairy farm explains the reasoning behind this percentage. Something else that I discovered when collecting data was that the facilities on a small family run dairy farm tend to be nicer places for workers to have their breaks. This is because the farmhouse is normally used, which is dry and sheltered from the wind. There is also heating in a farmhouse and areas to dry wet clothes. Whereas I noticed that on commercial dairy farms they tend to have a damp room without heating or a place to dry clothes, which can make a wet day extremely miserable and again affect workers mental health. Negative mental health often stimulates from working on your own for long periods of time. This is more common on small family run dairy farms due to the lack of staffing. There is more financial security working on a commercial farm because the farm is less likely to close down and if the business runs at a loss the farm worker's wages

should not be affected. However, owning a small family run dairy farm means that if the business runs at a loss the farm owners wages will probably decrease. There is a higher likelihood of smaller farms closing down due to the increasing production costs. The biggest social difference between the two different types of farm is the affect that they have on the community. Both farms create noise and smell pollution on different levels, which changes the effect on the surrounding community. Opportunities for employment is a benefit of commercial dairy farms. Whereas opportunities for days out and opening doors to an education of agriculture is provided by small family run dairy farms.

To conclude, commercial dairy farms have more financial security and tend to increase in profits each year whereas small family run dairy farms normally have to diversify to be able to cover milk production costs. Both types of farms have similar effects on the environment because although commercial dairy farms have a bigger impact on what they release into the atmosphere, they are also getting involved in environmental grants that protect the environment. Whereas small family run dairy farms are not releasing as many emissions, but they are also not taking part in the large environmental schemes. Finally social factors tend to be better on small family run dairy farms but only if the farm has a reliable relief milker. Mental health factors can affect either type of farm workers, but my research revealed that commercial dairy farm workers are more vulnerable to mental health issues.

# Bibliography


Nfuonline.com. (2024). *Dairy contract legislation – essential information*. [online] Available at: https://www.nfuonline.com/updates-and-information/dairy-contract-legislation-essential-information/.

Ahdb.org.uk. (2024). *Average Farm Business Income for the dairy sector forecast to rise for 2024/25 | AHDB*. [online] Available at: https://ahdb.org.uk/news/average-farm-business-income-for-the-dairy-sector-forecast-to-rise-for-2024-25.

Ahdb.org.uk. (2024). *Key comparisons between top and bottom performing dairy farms | AHDB*. [online] Available at: https://ahdb.org.uk/key-comparisons-between-dairy-top-and-bottom-performing-farms.

Farmers Weekly. (2025). *What makes a sustainable dairy farm – survey results - Farmers Weekly*. [online] Available at: https://www.fwi.co.uk/livestock/what-makes-a-sustainable-dairy-farm-survey-results.

Ahdb.org.uk. (n.d.). *Dairy: Environment | AHDB*. [online] Available at: https://ahdb.org.uk/dairy-environment.

GOV.UK (2022). *Funding for farmers*. [online] GOV.UK. Available at: https://www.gov.uk/guidance/funding-for-farmers.

Nfuonline.com. (2025). *COP26: UK Dairy Roadmap announces net zero climate ambition*. [online] Available at: https://www.nfuonline.com/updates-and-information/cop26-uk-dairy-roadmap-announces-net-zero-climate-ambition-1/ [Accessed 8 May 2025].

Farmers Weekly. (2025). *Poor mental health key factor in UK dairy farmer exodus - Farmers Weekly*. [online] Available at: https://www.fwi.co.uk/news/study-links-mental-health-issues-to-dairy-farmer-exodus.