

# Future Farm update



Welcome and enjoy this brand-new newsletter giving you an update of Future Farm!

## IN THIS ISSUE

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*A summary of the UK industry events, key dates and top news stories for July 2024*

### **An insight into the performance of the farm animals**

*A visual representation of the performance of our animals and how our farm compares*

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*A few details on our progress since the formation of Future Farm.*

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*An update on our staff organisation chart, as we have welcomed new staff members to the team.*

### **Did you know...**

*Our monthly section contains general farming facts.*

### **Staff vacancies and new starters**

*A list of current staff vacancies and new starter introduction on Future Farm*

### **Thank you and Feedback**

*A brief thank you to our readers and details on where you can give feedback*

*Don't forget to check out our website for more information on the farm at <https://futurefarm.zone/>*

# Industry events, key dates & news:

## Upcoming events:

**Chatsworth Country Fair** – 30<sup>th</sup> August and 1<sup>st</sup> September 2024 @ *Chatsworth, Bakewell*

**Dorset County Show** – 7<sup>th</sup> and 8<sup>th</sup> September 2024 @ *The Dorchester Showground, Dorchester*

**UK Dairy Day** – 11<sup>th</sup> September 2024 @ *The International Centre, Telford*

**National Country Show Live** – 14<sup>th</sup> till 16<sup>th</sup> September 2024 @ *Hylands Park, Chelmsford*

**Tillage Live** – 18<sup>th</sup> September 2024 @ *Norton Fields, Tadcaster*

**Newbury Show** – 21<sup>st</sup> and 22<sup>nd</sup> September 2024 @ *Newbury Showground*

**BETA International** – 22<sup>nd</sup> and 23<sup>rd</sup> September 2024 @ *NAEC Stoneleigh*

**Women in Dairy Conference** – 25<sup>th</sup> September 2024 @ *Churchfields Farm, Droitwich*

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## Key farming dates reminder to stay compliant\*:

### **2<sup>nd</sup> September**

- If you missed the deadline for submitting the 2024 Countryside Stewardship or Environmental Stewardship claim without reduction (15<sup>th</sup> May 2024), you can still submit a claim until 11.59pm on Wednesday 2<sup>nd</sup> September 2024, with a 25% reduction for claims submitted after 2<sup>nd</sup> July 2024.

\* Key Farming dates provided by CXCS

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## Top news stories affecting Future Farm:

### **Local news**

We would like to congratulate Tom York, a third-year BSc (Hons) Agri-business student, who competed in an Ultimate Triathlon for charity in Ellesmere. Tom raised money for The Farming Community Network (FCN) to increase awareness of mental health issues in agriculture. His fundraising campaign was a huge success as he surpassed his initial target (£500) by raising £7,430. Tom should be extremely proud of his achievement and the good he has done for FCN. Now it is time for Tom to rest for the summer and prepare for his final year of study at HAU.

## Farm Compliance

Farming compliance in England is shifting to an environmental focus. Even though the requirements under the Basic Payment Scheme cross-compliance regime will not alter, there will now be three additional areas under the spotlight: soil, silage and slurry. As there are gaps in nitrate vulnerable zone record-keeping and inadequate protection zones next to hedgerows and watercourses identified on some small farms in the UK.

The shift comes as the Rural Payments Agency (RPA) will be conducting fewer inspections and the Environment Agency (EA) will take the lead with these inspections. Financial consequences will be observed if the additional guidelines in the regime are not followed. To ensure a farm remains compliant, these starting measures should be taken:

- Take soil samples and analyze pH, phosphorus, magnesium, and potassium levels when an application is being planned.
  - The results must be no more than five years old at the time of the application.
  - Nitrogen levels can be established through assessment of soil nitrogen supply
  - Covers agricultural land (including grassland) that has been cultivated by physical means (ploughing or sowing) at least once in the previous year, or by chemical means (application of organic manure or fertilizer) at least once in the previous three years.
- Supply an adequate nutrient management plan
  - Document all activity of nutrient movements on and off the farm.

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From recent EA inspections around the nation, it has been identified that some farmers have not taken reasonable precautions to prevent agricultural pollution occurring in relation to cattle watering. Under the Farming Rules for Water, farmers must comply with Rule 7 which stipulates that any land within 5 meters of inland freshwater and coastal waters must be protected from significant soil erosion by preventing poaching from livestock.

If livestock have access to watercourses, they can cause:

- Banks to collapse increasing flood risk and loss of productive land
- Pollution and habitat damage for invertebrates and spawning fish.
- Soil erosion - contributing to siltation and affecting the flow of water.
- Degradation of bankside vegetation – leading to habitat loss.
- Risk to human and animal health and impact on bathing and shellfish water quality from direct deposition of animal waste in water
- Possible unchecked livestock access to watercourses – negatively impacting herd health and biosecurity.

(cont.)

Methods of good practice in relation to cattle watering:

- Fence off surface waters to prevent livestock fouling in the water, damaging banks and soil into the water.
- Installation of pasture pumps, solar pumps or mains water supply to provide alternative watering facilities.
- Position livestock feeders and drinkers away from watercourses and move at frequent intervals to minimise poaching and soil erosion.
- Establish hedges alongside watercourses to prevent access, enhance biodiversity and reduce diffuse pollution.

Funding to install fencing and other capital items needed to comply with the regulation can be provided under the [Countryside Stewardship Capital Grant Scheme](#).

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Denying an EA officer access to land to conduct lawful assessments will also lead to financial consequences. Earlier this month, a farmer was ordered to pay £4,000 for evading slurry water test.

The farmer was fined after taking water samples off an EA officer who was investigating pollution in a brook from slurry on his farm. An ammonia test was carried out on the brook water, which found the maximum measurable reading of 10 mg/litre. The farmer disputed the EA officer's authorization to take samples which is when the farmer picked the samples up and drove away from the officer. After the court hearing where the fine was announced a spokesperson for the EA was clear to state that they "will not hesitate in pursuing anyone who tries to prevent our officers from carrying out work to protect the environment."

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Future Farm is fortunate to use the company CXCS to ensure our farm is following the cross-compliance regime and any regulations set out by governing bodies, especially guaranteeing we adhere to the regulations surrounding nitrate vulnerable zones. CXCS audits our farm annually to guarantee we remain compliant and would advise us of any scheduled EA inspections within the area. As a farm we would never refuse an EA officer right to inspect elements of our farm or prevent them from doing their job.

## Cabbage Stem Flea Beetle (CSFB)

The drilling season of winter oilseed rape is now in full swing. The largest obstacle for this crop to overcome in early life is the burden of cabbage stem flea beetle (CSFB) numbers. With no chemical or cultural approach that reliably manages this pest, farmers are reliant on controlling them using a combination of integrated pest management (IPM) techniques to suppress the population. But with so many possible techniques to choose from, which one should be used?

IPM is an ecosystem-based strategy that focusses on the long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation and the use of resistant varieties. With IPM, action is taken to keep pests from becoming a problem by growing a healthy crop to withstand pest attacks, rather than eliminating the pests observed. Using IPM techniques also considers the environmental factors that affect the pest and its ability to thrive.

An AHDB-funded research project identified the key components of a CSFB IPM strategy and developed a traffic light system, to indicate the current reliability for CSFB population control in oilseed rape.

### **Green** - Best control:

- Soil moisture – Sufficient soil moisture during crop emergence is critical, a lack of moisture results in delayed, uneven and non-vigorous emergence, and a greater impact on flea beetle. Farmers could adjust the sowing date to help optimise moisture levels.
- Sowing date – Early sowing (before late-August) increases the likelihood that the crop will emerge and establish sufficiently before flea beetle migration occurs, providing there is soil moisture. Reducing the risk of the crop being lost due to foliar feeding.
- Trap crops – Oilseed rape volunteers can act as a trap crop and divert flea beetle away from nearby rapeseed crops. When the trap crops are destroyed, CSFB eggs and larvae die, and inhibits the ability of the adult CSFB from moving to another oilseed rape crop.
- Companion crops – Several companion crop species (e.g. buckwheat and legumes) could play a role in CSFB management in the form of attracting the pest, improving soil, masking the crop from CSFB or offering shelter for natural enemies. Another companion crop such as mustard, can act as sacrificial plants that are eaten in preference to oilseed rape.

(cont.)

**Amber** – Moderate control:

- Organic amendments – Some benefit has been seen using organic amendments, it is shown that digestate can reduce adult CSFB numbers and improve establishment, however, more work is required to see which organic amendments work best to maximise control.
- Managed defoliation – Flea beetle larvae are more likely to be present in leaf petioles than in the stem. Therefore, managed defoliation reduced larval numbers significantly in plot trials (by 23-55%) with late defoliation, before stem extension, being most effective. Whilst field scale trials using sheep or topping saw good reductions in larval loads, there was a reduction in final yields in most of the trials, likely due to the defoliation being too severe or occurring too late. This approach is best suited to early drilled crops, as they can withstand defoliation, and tend to hold more larvae.

**Red** – Little or no control (there is little evidence that these following strategies reliably offer control of CSFB, and more research is required):

- Novel insecticides/biopesticides
- Varieties
- Straw/stubble management
- Establishment technique
- Seed rate
- Enhanced crop resilience

## Top tips:

- Use cultivations to encourage a fresh flush of volunteers or broadcast home-saved seed to produce a cheap, sacrificial trap crop. Avoid removing OSR volunteers before late September.
- Sow companion crops one to two weeks before drilling oilseed rape and choose a companion crop that won't outcompete oilseed rape.

It should be noted that any measures deployed to manage CSFB are not guaranteed to work. As changes in weather could see the timing of adult flea beetle migration shift so that a mid-August sown oilseed rape could be hit. Therefore, AHDB advise a range of sowing dates to spread the risk and stack IPM strategies to help minimise the risk further.

For more information on the traffic light system, please click [here](#) to view the work on the AHDB website.

## Milk

AHDB teamed up with Team GB athletes to promote the nutritional benefits of milk. Olympic champion Christine Ohuruogu and four team GB athletes were painted in gold while holding a glass of milk ahead on the Paris Olympics as part of the AHDB's 'Milk Every Golden Moment' campaign.

In a survey commissioned by AHDB, it found that milk is the preferred drink to support fitness and exercise, ahead of supplementary drinks and protein shakes. This was further confirmed after an interview with Christine where she stated, "As an athlete, I needed healthy bones and muscles, but also something that gives me that spark of energy" she continued "I think milk is often overlooked and people tend to reach for supplements, but I believe in a natural diet and keeping it simple." For more information about the campaign and recipes, please [click](#) here.

Milk has been a hot topic in the news recently, as the Fair Dealing Obligations (Milk) Regulations 2024 was announced making various provisions for milk purchase contracts. Starting in July 2024, all new milk contracts must comply with the Regulations and all existing milk contracts must comply with the Regulations by July 9, 2025. The main topics the Regulation includes are:

- **Price** – must have a fixed price, a variable price, or a combination of both, there will be no 'set price' or 'minimum price'.
- **Variation** – any variation to the contract must be agreed by both parties, the purchaser cannot enforce unilateral changes to the contract.
- **Cooling off period** – A producer may terminate the milk purchase contract without penalty within the first 21 days of the contract being made.
- **Termination** - A purchaser must give the producer at least 12 months' notice, unless the contract is less than 12 months. The Regulations also include circumstances where the contract can be terminated with immediate effect.
- **Exclusivity** - Exclusive contracts are still permitted, however you cannot have contracts where the price to be paid for the milk changes if the amount of milk provided by the producer exceeds a certain volume.

For more detailed information on the new regulation, please click [here](#) to view the guidance online.

Since this regulation was announced, Muller has warned 26 small UK dairy farmers that they will be dropped unless they increase milk volumes. The farms have been served a 12-month notice period and Muller has offered their support throughout this period, however, one farm is already undergoing the process of herd dispersal.

Future Farm has a milk contract with Muller, and we have a high-performance dairy unit averaging 10,000 litres of milk a day and supplying quality milk to Muller, if we continue with the guidelines and stipulations set out in our milk contract, we have no cause for concern that Muller would give the farm a notice period.

# Future Farm Animal Performance in July 2024:

The Main Dairy milk yield and KPI's in comparison to all NMR recorded herds of a similar herd size (Please note. The data in the graph and screenshot of the KPI table are from Herd Companion)

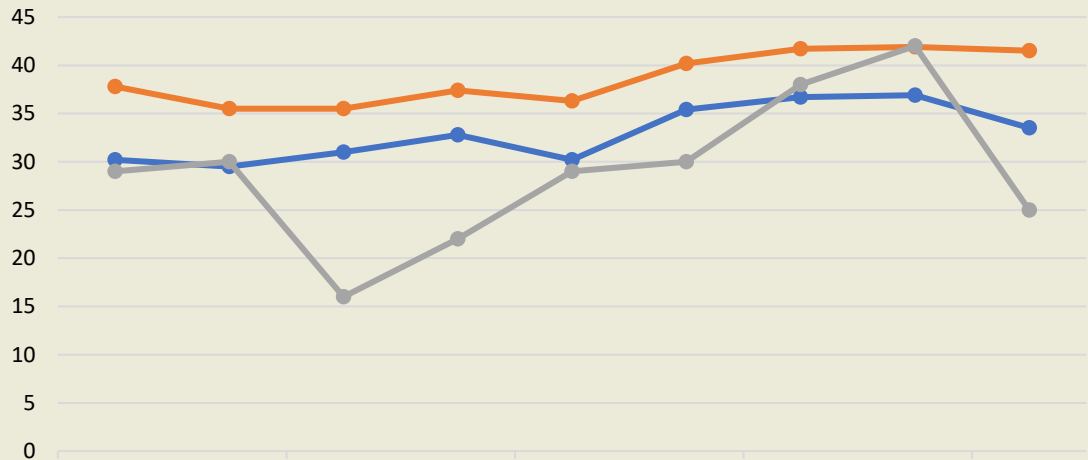
## Herd Production Summary - Main Dairy

**Key:**

Avg Yield = Quantity of milk (kg) / Numbers of cows in herd

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SCC > 200 = Somatic Cell Count over 200 cells per ml of milk



	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24
Avg Yield	30.2	29.5	31	32.8	30.2	35.4	36.7	36.9	33.5
Avg Milking Yield	37.8	35.5	35.5	37.4	36.3	40.2	41.7	41.9	41.5
SCC > 200	29	30	16	22	29	30	38	42	25

Benchmark	New	Export
NMR14: Holstein herds > 300 cows	Benchmarks	Export

Drag a column header here to group by that column

KPIs	'Worst' <-----> 'Best'	Worst	You	Best	Mean
Milk/Cow/Year of life		3,771	7,866	8,791	5,941
Milk/Cow/Year		6,335	12,014	13,115	9,807
Lactation Yield		5,918	11,564	12,995	9,646
305 Day yield		5,831	10,073	11,713	8,814
Protein/Cow/Year		215	381	427	332
Fat/Cow/Year		261	462	645	415
Ave. Protein %		3.11	3.17	3.79	3.40
Ave. Fat %		3.69	3.85	5.46	4.25
Mean Parity		1.99	2.68	3.50	2.72
Calv. Interval < 385 %		29.11	47.58	78.63	57.43
Ave. Lactation length		382	332	241	310
Ave. SCC		371	108	83	168
% Cows in Parity 1		46.19	26.10	12.80	30.48
Age 1st Calving		948	733	667	781
Ave. Calving Interval		459	399	365	391
Ave. Dry days		76	46	34	55
Culling + Death %		53	29	17	32
Ave. No. Cows		286	362	1,229	497



The Smart Dairy milk yield and KPI's in comparison to all NMR recorded herds of a similar herd size (Please note. The data in the graph and screenshot of the KPI table are from Herd Companion)

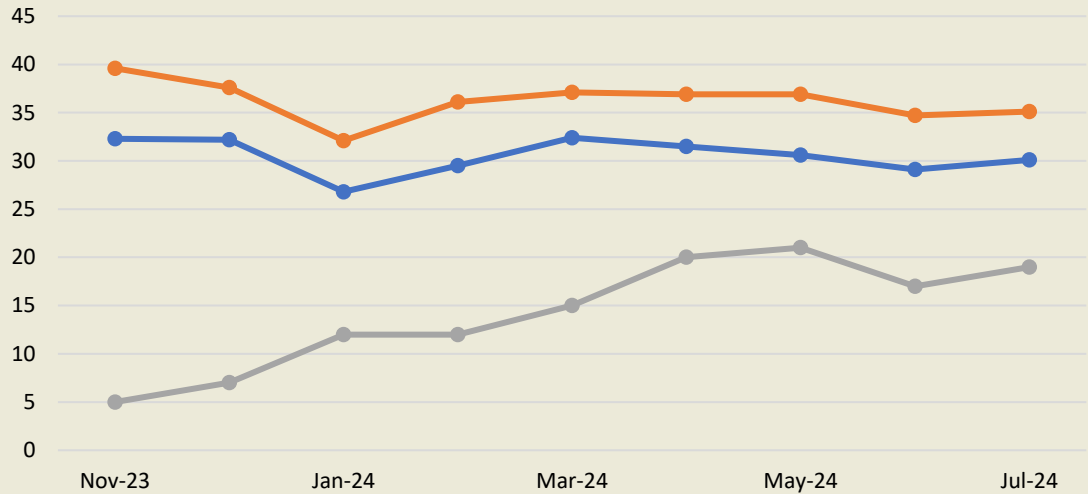
### Herd Production Summary - Smart Dairy

**Key:**

Avg Yield =  
Quantity of milk  
(kg) / Numbers  
of cows in herd

Avg Milk Yield =  
Quantity of milk  
(kg) / Number  
of cows in milk

SCC > 200 =  
Somatic Cell  
Count over 200  
cells per ml of  
milk



	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24
Avg Yield	32.3	32.2	26.8	29.5	32.4	31.5	30.6	29.1	30.1
Avg Milking Yield	39.6	37.6	32.1	36.1	37.1	36.9	36.9	34.7	35.1
SCC > 200	5	7	12	12	15	20	21	17	19

Benchmark	New	Export
NMR11: Holstein herds <= 100 cows	Benchmarks	Export

Drag a column header here to group by that column

KPIs	'Worst' <-----> 'Best'	Worst	You	Best	Mean
Milk/Cow/Year of life		1,652	9,446	7,335	4,517
Milk/Cow/Year		2,810	10,603	11,199	7,075
Lactation Yield		3,339	12,222	11,818	7,765
305 Day yield		2,928	10,686	9,864	6,795
Protein/Cow/Year		95	349	380	239
Fat/Cow/Year		123	387	475	298
Ave. Protein %		3.20	3.29	3.71	3.39
Ave. Fat %		3.20	3.65	5.34	4.21
Mean Parity		1.83	3.68	4.53	3.09
Calv. Interval < 385 %		4.76	34.21	70.67	44.79
Ave. Lactation length		546	309	207	339
Ave. SCC		950	633	80	210
% Cows in Parity 1		53.33	7.32	6.67	26.10
Age 1st Calving		1,351	745	732	895
Ave. Calving interval		679	425	375	416
Ave. Dry days		120	66	31	58
Culling + Death %		90	14	5	28
Ave. No. Cows		29	48	118	75

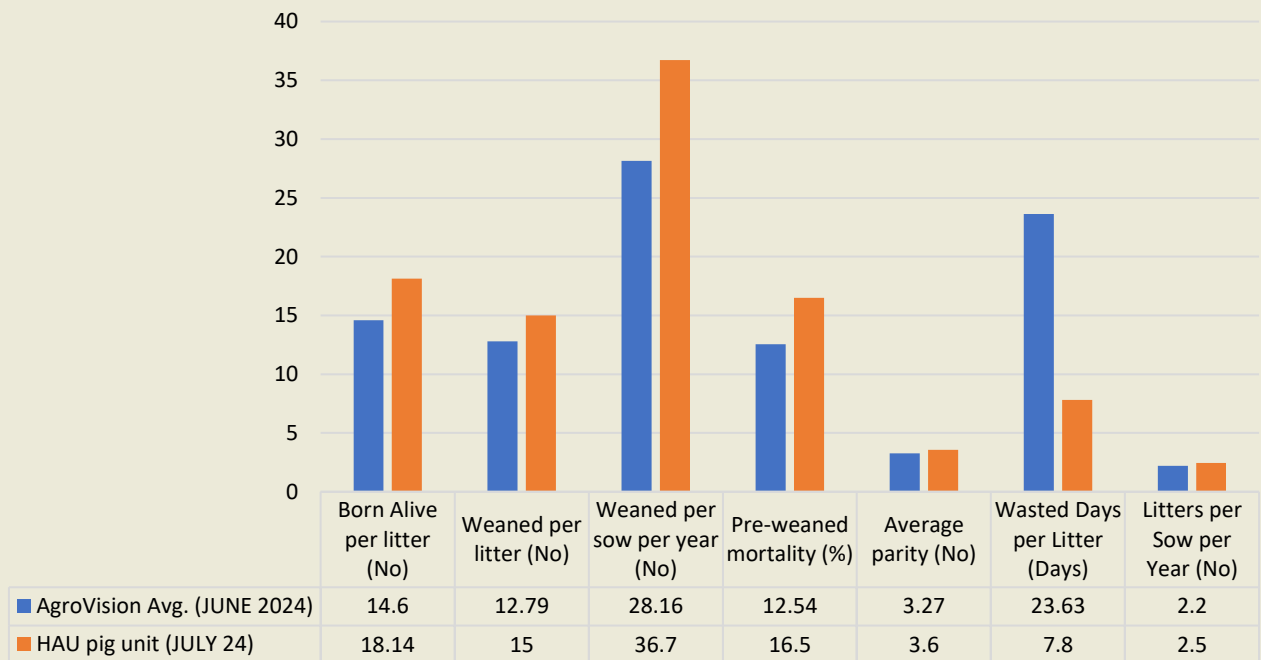
The Main dairy and Smart dairy milk quality components in comparison to the Benchmark Muller average

**July 2024**

	<b>Main Dairy</b>	<b>Smart Dairy</b>	<b>Muller Average</b>
Avg Bfat (%)	3.82	4.31	4.09
Avg Protein (%)	3.08	3.36	3.30
Avg SCC ('000/ml)	117	301	157.6
Avg BAC ('000/ml)	15	39	18.76
Therms (cfu/ml)	40	8200	759.7
FPD (m*C)	528	526	

The Pig unit production performance in comparison to the AgroVision Benchmark average (Please note. The AgroVision Benchmark figures are produced on a quarterly basis, for this performance comparison the June 2024 report has been used).

**Pig Unit Performance vs AgroVision Benchmark**



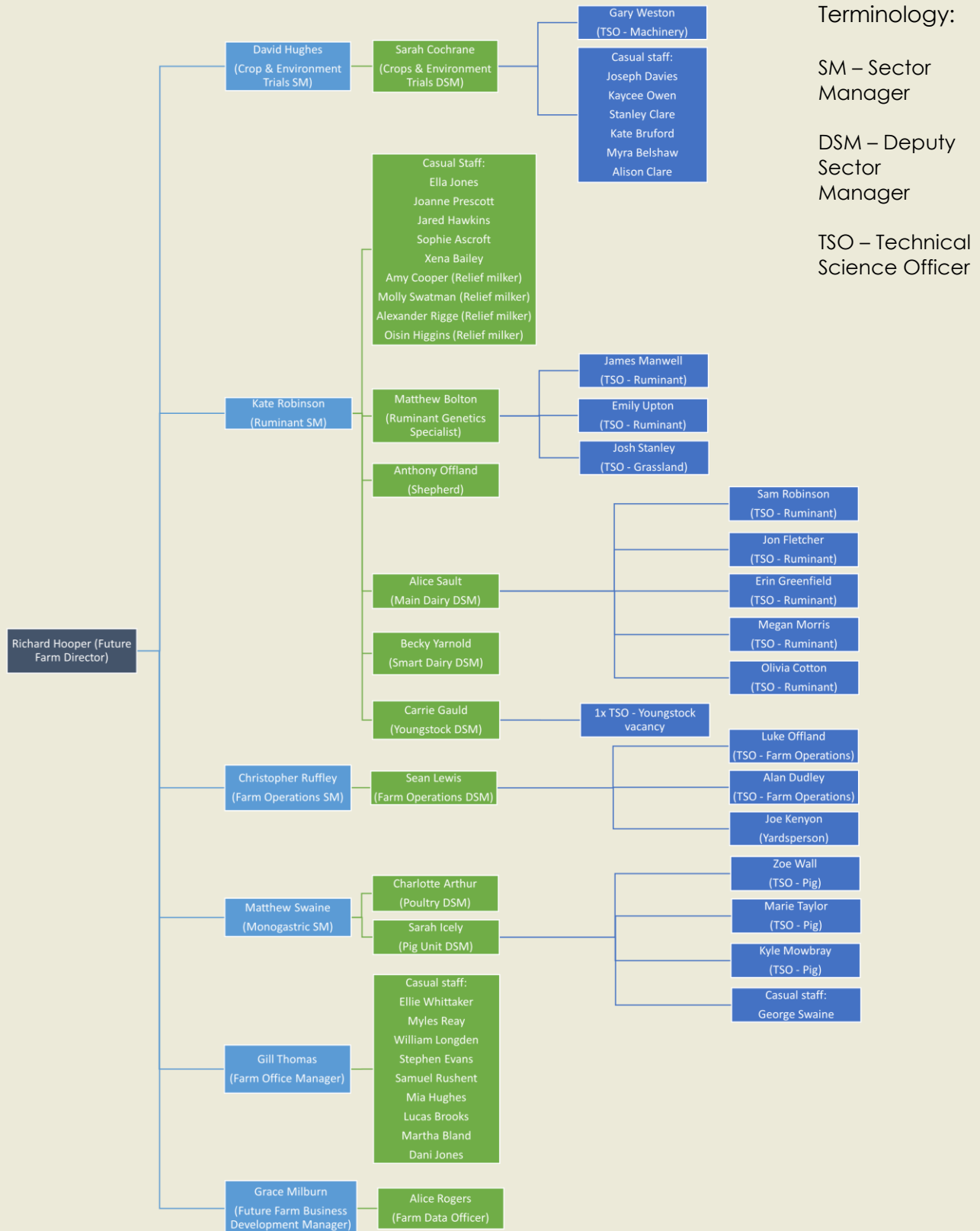
# How far we have come...

Since the formation of Future Farm in July 2022, some aspects of the farm have changed but we have also worked to improve the farm. Below is a list of some of the things we have done on the farm since the existence of Future Farm:

- Produced two carbon calculations, focusing on identifying and reducing the greenhouse gas emissions from the commercial side of the farm.
- Improved the health and wellbeing of our dairy cows by installing:
  - Ventilation fans in the cow sheds and parlour
  - Cow brushes
  - Automatic footbath (iBath) in the main dairy
  - New mattresses in the cubicles
  - New technology into the unit called Cow Manager and Smart bell - Wellcalf
  - New water troughs
  - Thermal heat index data loggers
  - Automatic scrapers between the passageway of the main dairy sheds
  - A calving gate in the dry cow shed allows for the safe examination and assistance of cows during calving
- Also, removed the feed yokes in the dairy sheds which has increased the capacity of cows at the feed face and encouraged a more natural standing position
- Work closely with the four environmental sustainability (ES) groups, which were formed after the establishment of Future Farm:
  - ES farm Energy and Water group
  - ES farm Data group
  - ES farm Productivity group
  - ES farm Land and Soil group
- The introduction of a 2<sup>nd</sup> finisher ration at the 80kg to 112kg weight range, which contains a lower true protein content to lower the carbon emissions per liveweight gain from the unit.
- Introducing outdoor lambing to the sheep unit in 2023, initially starting with a small number of ewes but hoping to increase numbers annually.
- Moved a slurry meter into the pig line.
- Increased our emphasis on producing home-grown feed for our ruminant animals, reducing the need to purchase in feed.
- Held two Open Farm events, with the latter being supported by LEAF.

# Future Farm staff organisation chart:

Throughout the year new members of staff have joined the farm, so we have updated our organisation chart for you to see our team.



## Did you know...

- Oilseed rape was originally produced as a lubricant for machinery as it has high levels of glucosinolate and erucic acid.
- Processing oilseed rape for oil, produces a high protein animal feed, which can rival soybean, that is fed to cattle, pigs, and chickens.
- The oil can be used as biodiesel, used straight in heated fuel systems and newer engine cars or blended with petroleum distillates for powering older cars.



Photo by mailsparky on Freeimages.com

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## Staff vacancies and new starters:

### Ruminant sector:

1 x Ruminant Youngstock Technical Science Officer position – for more information [click here](#).

### Monogastric sector:

We are delighted to welcome Kyle Mowbray to the Monogastric sector as a Technical Science Officer for the pig unit. Kyle began working at Future Farm as a casual member of staff, so we are glad he is now a permanent member of the team.

On behalf of everyone at Future Farm, we wish Kyle all the best in his new role.

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Thank you for reading the Future Farm monthly update newsletter, if you have any feedback or would like to see something in upcoming updates, please send your request to [futurefarmenquiries@harper-adams.ac.uk](mailto:futurefarmenquiries@harper-adams.ac.uk).

We apologise for anyone who made a suggestion for the newsletter and the content you requested was not included. We are doing our best to gather this information for future issues. In the meantime, if you or someone else would like to know more about the farm and our practices, check out our newly updated website <https://futurefarm.zone/>.