

# Pigs

March 2025

**Edited by Ciarán Carroll**



Welcome to the March edition of the Teagasc Pig Newsletter. We have a very full newsletter this month covering everything from

nutrition to energy efficiency.

Michael McKeon looks at the lactation feed requirements of the modern sow and provides key insights into how we can increase our sow lactation feed intakes.

Emer McCrum looks at the Farm Energy Cost, and how we can improve our efficiency via farm energy audits, buildings and technology upgrades and investing in renewables.

Keelin O'Driscoll tells us about a new EU Partnership in Animal Health & Welfare, an

ambitious research and innovation initiative the European Commission (EC) has funded to control infectious diseases of animals, and to promote animal welfare.

Finally, the Teagasc Pig Development Department will have our usual stand at the Irish Pig Health Society Symposium at the Curragh on April 8<sup>th</sup>. Make sure you call to us!

## In this issue

- Eating more in lactation – easier said than done!
- Farm Energy Costs – improving efficiency
- EU Partnership in Animal Health & Welfare

## Eating more in lactation – easier said than done!

*Michael McKeon, Moorepark*

Pig producers are constantly being told about the importance of high feed intake in the farrowing house. If you get it right you achieve high milk yield, weaning weights, and reproductive performance improve. Conversely, poor lactation intake leads to increased pre-weaning mortality, low weaning weights, and reduced subsequent fertility and litter size.

So we all agree that intakes are a great idea, but the tricky part is how to achieve them? How do we get from 'talking the talk' to 'walking the walk'? Well the first step is to have a plan, as 'a target without a plan is just a wish'!

I'd suggest the plan should be simple but effective, as follows.

### 'The Plan'

1. What is the lactation intake target?
2. What is our current intake?
3. What will improve our intakes?
4. How do we measure our success?

### 1. Lactation Feed Intake Targets

The required feed intake varies depending on the number of piglets weaned and their weaning weight. Research by Peadar Lawlor suggests that a sow needs an additional **7 MJ DE/day per extra piglet** and **5.4 MJ DE/day per additional kg of weaning weight**. The baseline intake target is **95 MJ DE/day for gilts** and **105 MJ DE/day for sows**. In dry feed terms, this equates to **6.7 kg/day for gilts** and **7.4 kg/day for sows**, assuming an energy density of 14.2 MJ DE/kg.

### 2. What is our current intake?

If your lactation sows are wet-fed then there are two ways to calculating intakes:

- (a) Use the feed curve to calculate: by using the feed curve you can calculate the estimated intakes per day (see sample curve). However, this is only an estimate!

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| Day          | MJ DE |       |
|--------------|-------|-------|
|              | Gilt  | Sow   |
| 0            | 28    | 33    |
| 1            | 36    | 40    |
| 2            | 43    | 48    |
| 3            | 56    | 62    |
| 4            | 68    | 75    |
| 5            | 77    | 85    |
| 6            | 84    | 93    |
| 7            | 90    | 100   |
| 8            | 95    | 105   |
| 9            | 99    | 110   |
| 10           | 99    | 110   |
| 11           | 101   | 112   |
| 12           | 104   | 115   |
| 13           | 104   | 115   |
| 14           | 104   | 115   |
| 15           | 104   | 115   |
| 16           | 104   | 116   |
| 17           | 104   | 116   |
| 18           | 106   | 118   |
| 19           | 106   | 118   |
| 20           | 108   | 120   |
| 21           | 108   | 120   |
| 22           | 110   | 122   |
| 23           | 110   | 122   |
| 24           | 110   | 122   |
| 25           | 110   | 124   |
| 26           | 110   | 124   |
| 27           | 112   | 124   |
| 28           | 112   | 126   |
| 29           | 113   | 126   |
| 30           | 113   | 126   |
| Ave          | 94.5  | 105.1 |
| Kg @ 14.2 MJ | 6.7   | 7.4   |

(b) Use actual feed valve intakes: this will give an accurate estimate of what each sow

actually ate. Zero the valves on entry and take a picture of the feed computer screen when weaned – see below.

*WhatsApp* the picture to your advisor to benchmark the intakes. If this is done for a few batches it will give you a very accurate estimate of your lactation intakes.

| ⊗ SURVEY SUMMARY PENS |         |          |          |
|-----------------------|---------|----------|----------|
| No.                   | MJ tot. | Kgs tot. | Feeddays |
| 11                    | 2422    | 875      | 24       |
| 12                    | 2662    | 964      | 25       |
| 13                    | 2325    | 844      | 23       |
| 14                    | 2308    | 837      | 24       |
| 15                    | 2716    | 983      | 25       |
| 16                    | 2758    | 999      | 26       |
| 17                    | 2884    | 1044     | 26       |
| 18                    | 2299    | 834      | 21       |
| 19                    | 2688    | 973      | 25       |
| 20                    | 2647    | 958      | 25       |

## 3. What will improve intakes?

To achieve **99 MJ for gilts** and **110 MJ for sows** by day 10, several factors influence feed intake, including:

### a. Gilt Age at Service

- Gilts should be **33-34 weeks** old at service to ensure sufficient body size for large intakes.
- Service beyond 38 weeks may cause lameness due to excessive body weight.

### b. Body Condition Management

- Overweight sows and gilts at farrowing have reduced appetites,

leading to poor intake. It's very important that gilts are not too fat.

c. **Water-to-Feed Ratio**

- A proper water-to-feed ratio encourages higher intake.
- A ratio of **3.1 rather than 3.5** minimizes excessive water consumption, allowing for more dry matter intake.

d. **Dry Feed Supplementation**

- A 0.5-1 kg dry feed supplement after day 10 can help maintain intake by reducing excessive liquid feed consumption.

e. **House Temperature Management**

- Excessive heat reduces feed intake by 200g per 1°C increase.
- Recommended temperatures:
  - Farrowing: 24°C
  - Post-farrowing (after 3 days): 21°C

f. **Feed Specification Adjustments**

- Higher energy density feed improves intake but is less effective than increasing daily feed volume.
- A diet change from 14.2 MJ/kg to 15 MJ/kg adds only **5.6 MJ/day**, whereas an extra 0.5 kg of feed adds **7.1 MJ/day**.

## 4. How do we measure success?

By zero'ing the valves for a batch initially once per month until you have achieved the target intakes & then monitoring the intakes thereafter once per quarter.

*Getting your sows to eat more can be difficult but it is achievable if you develop and implement an 'eating plan'.*

## Farm Energy Costs – improving energy efficiency

*Emer McCrum, Ballyhaise*

Energy use (measured in kWh/ pig produced) is a key environmental indicator of sustainability in the pig industry. Energy audits carried out on 23 pig farms showed a significant variation in usage ranging from 18kWh up to 45kWh, with an average figure of 28kWh/pig produced. This considerable variation highlights the need for some farms to prioritise energy management and efficiency.

Energy costs (heat, power & light) on average account for the third largest non-feed input after labour and healthcare costs respectively. Based on the 91 herds recording on the Teagasc Profit Monitor in 2023, the average cost per pig produced was €7.14 or €199 per sow per year (based on 27.9 pigs produced/ sow/ year). Efforts to improve energy management and efficiency therefore will have a benefit on the environmental and economic sustainability of the business in the long term. Now is an ideal opportunity to review your individual situation and consider measures to improve your performance in this area.

### Energy Audit

An energy audit is recommended for businesses spending over €10,000 on energy costs per year. The audit involves an onsite inspection by a Registered Energy Auditor who will provide a detailed report of your energy use in relation to your buildings, processes and systems. The full report includes:

- A detailed analysis of your energy use (e.g. heating fuels, electricity and transport)
- Where you use the most energy in your business (e.g. lighting, heating, etc.)
- A list of opportunities for reducing your energy use, including no or low cost changes, investment in renewables and other technologies

SEAI's Support Scheme for Energy Audits offers a €2,000 voucher towards the cost of a high quality energy audit for qualifying businesses with an annual energy spend of over €10,000. The application and approval process is quick and easy and in most cases, the financial support provided by SEAI will cover the entire cost of the Energy Audit.

## Building Upgrades

Heating of farrowing and weaner houses is one of the most energy expensive activities on farm. While the efficiency of your heating source is hugely important, insulation levels and the overall condition of the building envelope is critical. The provision of heat in poorly insulated buildings is a costly and wasteful exercise. Good quality insulation can last for decades but exposure to moisture, pest and rodent infestation, and physical disturbance will deteriorate the insulation material over time. Upgrading the insulation in walls and ceilings has many benefits including:

- Reduction in the heat load required to achieve the desired temperature, thereby reducing heating costs.
- Improved thermal comfort for animals in both winter and summertime, which in turn will improve performance.
- Stabilisation of room temperatures through the elimination of draughts, cold spots and fluctuations in the pig environment will improve health and welfare of animals.
- Coated insulation boards that can be power washed will improve room hygiene, many are white which reflects light around the building and depending on the design of the building, can be fitted below

the purlins, ensuring no disturbance to air flow.

## Energy Efficiency Upgrades

The following upgrades are capital intensive but will reduce energy usage and improve the overall sustainability of the operation long term.

- Lighting is a key consumer of energy on pig farms but an essential component of animal welfare and productivity. The installation of LEDs represents an 80-90% saving in energy usage compared to conventional lighting as well as potential health and productivity benefits. The lifespan of high-quality LED lamps is up to 50 times longer when compared to alternatives and most modern installations are very durable tolerating exposure to moisture, dust and ammonia.
- Given that heating is the largest consumer of energy on farms, any improvements to the efficiency of the heating source will make an impact on overall energy costs. Newer technologies including heat recovery units, air source heat pumps and indirect heating systems are more energy efficient when compared to conventional electrical heating options but capital costs are higher. There are however interim solutions that can reduce heating costs.



Creating a microclimate by installing insulated creep covers in farrowing and weaner housing allows you to reduce the overall room temperature while ensuring pigs have access to a warm and comfortable nest, thereby reducing the overall heating requirement. Upgrading the electrical and water heat pads in farrowing and weaner housing to more energy efficient models will help to reduce running costs and allow for more reliable temperature control particularly for newborn piglets.

- Ventilation of pig houses is another key consumer of energy on farms. Inefficient ventilation is detrimental to pig performance particularly on hot days and costs more to run. Relatively simple steps such as replacing old fans with energy efficient models will pay back quickly and is likely to improve odour dispersal. Regular system maintenance and cleaning of fans will also improve the efficiency of ventilation systems. It is important to note that all ventilation systems will operate at optimum efficiency when airflow is properly controlled without influence from draughts or leaks, again highlighting the importance of building envelope.

## Investment in Renewables

Modern solar PV installations provide a reliable source of renewable energy to pig units helping to offset energy bills. Generally, solar PV will generate 20 to 50% of the annual requirement and once installed, the maintenance and operating costs are small. Pig farms will require robust panels so producers should enquire about product and performance warranties. Depending on the current unit rate for electricity and level of grant funding, payback on panels can be as low as three to five years. The TAMS Solar Capital Investment Scheme provides 60% grant funding up to a ceiling of €90,000 which is a very attractive option. The removal of the requirement for planning permission for roof-mounted panels has been a welcome development. Please note planning is required for ground-mounted panels where the array exceeds 75m<sup>2</sup> and 2.5m in height.

Energy efficiency is a broad topic and every farm is different in terms of the individual opportunities to improve performance in this area. Start with a simple 'back of the envelope' calculation by gathering your energy bills for the last six months. Add up your total kWh usage, double this figure and divide it by the total number of pigs produced on farm in 2024. This will give you a rough indicator of your usage in

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kWh per pig produced, which you can use to benchmark against the results of Irish audits provided in the introduction above. A professional Energy Audit however is recommended to help target your attention and investment in the right areas for maximum results. It's important to note that many of the energy efficiency investments discussed in this article are grant funded under the TAMS Pig & Poultry Investment Scheme at a rate of 40% up to a ceiling of €500,000. Contact your local advisor to find out more.



## EU Partnership in Animal Health & Welfare

*Keelin O'Driscoll, Moorepark*



The European Partnership on Animal Health and Welfare is by far the most ambitious research and innovation initiative the European Commission (EC) has funded to control infectious diseases of animals, and to promote animal welfare. Launched last year (2024), the innovative Partnership is anticipated to invest €360 million over seven years to boost research and facilitate cooperation between all actors. The scope goes beyond the animal health and welfare actors to enhance cross sector collaboration and, through a One Health and One Welfare approach, to provide societal impact. The objectives of the EUP AH&W align with the European Green Deal and its associated Farm to Fork strategy for a fair, healthy, and environmentally friendly food system. Teagasc is contributing to the partnership as both a Research Performing Organisation, and a Funding Organisation, with the research aspect led by Keelin O'Driscoll. The partnership is split

into 22 different actions, and Teagasc researchers are leading tasks in two of them

### **Sustainability aspects of Animal Welfare promoting livestock systems**

Improved animal welfare is part of a transition to more ethical and sustainable farming systems as emphasized in the EU Farm-2-Fork strategy. However, society also requires a minimum negative environmental impact and even that livestock should deliver ecosystem services such as contributing to enhancing low emissions, sequestration of ammonia emission production and carbon in soil, and/or eating waste products from production of green proteins for human consumption. In addition, all these societal demands will not be met without an economically viable sector, and production systems that provide attractive working conditions.

The aims of this action are to gather specialists in animal welfare, animal health and animal sciences together with scientific experts in other dimensions of sustainability (economics, social and environmental), to propose shared

approaches and tools necessary for assessing sustainability (multi-criteria assessment). In this action we will identify knowledge gaps and innovations based on literature and case studies to identify trade-offs as well as synergies between animal welfare and other dimensions of sustainability. Existing tools to assess livestock systems sustainability usually include environmental, social and economic indicators, but objective, animal centric measures of animal welfare are often not incorporated. There is a need to understand how systems that promote animal welfare influence other sustainability dimensions (e.g., reduced impact upon the climate), and vice versa. We will carry out a survey and workshop to gather information regarding existing sustainability assessment tools across the EU, to evaluate which metrics are used to assess sustainability, and determine how best to harmonise measurements. This area dovetails well with investigation into other aspects of sustainability, such as reducing the environmental impact of pig production that are being carried out in the PDD.

## Knowledge Platform

The section action that we are leading a task in is to establish a Knowledge platform in the EU with the objective to collect, analyse, share and use

integrated scientific and technical data on animal welfare. The aim is to contribute to design of, and harmonize surveillance and monitoring systems for animal health and welfare across the EU. Again, this involves creation of a network of relevant stakeholders and identify, collect, collate and analyse animal welfare measures, methods, protocols, tools and data. The Knowledge Platform will identify, collect, collate, analyse and to share feedback on the results of animal welfare assessments in a systematic way on farm, during transport and at slaughter. This will include the standardization of indicators and monitoring processes that should be developed in the future activities of the Partnership, and across the EU so that benchmarking can occur between regions and across time. Overall, the aim is to design a flexible data model of Animal Welfare assessment in the EU for centralised and harmonised monitoring and surveillance systems. The Teagasc team will co-ordinate communication and dissemination activities for this part of the project.

During the project we plan to engage with industry stakeholders by disseminating updates on the activities of the partnership, and also hopefully to receive the opinion and expertise from relevant persons and organisations with regard to both actions.

## Signpost Farms – Tillage Programme Farm Walk

Gerard McCutcheon and the Teagasc Signpost farms team held a very successful farm walk on the Farm of Mattie & Miriam Moore, pig and tillage farmers, in Offaly last week. This was the second farm walk on the Moore farm where we followed their sustainability journey using on-farm nutrients (pig slurry) to grow cereal crops to use in their own feed mill, ensuring circularity while reducing production costs on farm. Topics discussed on the day included the farm profile performance and carbon data, hydrometer testing of slurry for best use of organic manures and a live demonstration using an umbilical LESS spreading system.

## WELFARMERS Project



You are well aware by now of our Welfarmers project where pig farmers, advisors and researchers from eight EU countries have joined forces to identify the best existing approaches to tackle welfare issues on the four very important pig welfare themes in the EU: Loose housing facilities for lactating sows, Methods to reduce pain during castration, Methods to raise undocked pigs and Optimisation of space allowance and flooring for fatteners.

Within these four themes, 192 good practices will be identified across the EU and evaluated by experts in the area including farmers, technical advisors and researchers. We are now looking to gather these good practices so if you or someone you know has a good practice that addresses any area under the four themes we'd like to hear from you. [Share your good practices with us by completing this form](#). We'll follow up to gather the full details in due course.

Selected best practices will be awarded the title of WelFarmers Champions and, more importantly, plenty of dissemination materials will be produced so that farmers all over the world can explore these best practices. The materials will include virtual tours that allow farmers to visit the farms virtually in detail, with no need to travel. Webinars and podcasts where the farmers will be asked all the relevant details on their best practices. All best practices will also be submitted for cost-benefit analysis and sustainability assessment.

Our communications partner in the project, pig333.com ran a webinar last week, WelFarmers: Our dedication stands in respecting pigs. The webinar discussed the project and gives some examples of the Good Practices being collected for dissemination. [Watch the webinar recording here](#).

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## Teagasc Pig Welfare Workshops

The Teagasc Pig Development Department are running a number of Pig Welfare Workshops this week. Under Pig Welfare Legislation, every farm must have someone who has attended a training course in pig welfare. It is also a requirement for the Bord Bia Quality Assurance Scheme. The workshops will be held at Teagasc Moorepark (April 1<sup>st</sup>), Teagasc Tullamore (April 2<sup>nd</sup>) and Teagasc Ballyhaise (April 3<sup>rd</sup>). If you are interested in attending or want to send someone on the course please contact Charlotte [Charlotte.DuToit@teagasc.ie](mailto:Charlotte.DuToit@teagasc.ie) to book your place.

## Irish Pig Health Symposium 2025



The Irish Pig Health Symposium 2025 event is taking place once again at The Curragh Racecourse on Tuesday, 8th April 2025. This year's symposium, themed "Pigs, People and Pathogens: Mastering Farrowing, Animal Health, and Workforce Management," will feature an exciting programme focused on key industry challenges and best practices. Make sure you call to our stand!

## European Pig Producers Congress

This year's European Pig Producers Congress will be in the Danish city of Kolding from May 14<sup>th</sup> to

16<sup>th</sup> and the theme chosen by Danske

Svineproducenter, the Danish Pig Farmers Association, is 'Future of Pig Farming'.

Wednesday afternoon starts with technical talks from the Danish Agriculture & Food Council and event sponsors DanBred, Ceva and Hendrix Genetics. Thursday's visits include a 1,200 sow farm and the Danish Pig Academy followed by an evening at Koldinghus Castle while Friday includes visits to the German border to view the infamous wild boar fence and the Danish Safety Wash for livestock transporters before the gala dinner at the hotel on Friday night. The Congress fee for members is €420 and accommodation is €150 per night. Explore smart farming, innovate for tomorrow and network globally, Danish delights await you!! For more information please contact EPP Ireland secretary Shane McAuliffe.

## Welcome Jack O'Neill!



Jack O'Neill will be working on the [EU NUTRITIVE](#) project, which aims to address existing challenges by developing a decision-making

tool, capable of defining the most efficient and sustainable manure management strategy for a given livestock farm. Jack completed both his BSc (Hons) in Agricultural Science and MSc in Organic and Biological Agriculture from South East Technological University, and has been working for Teagasc for the past two years.