Teagasc Advisory Newsletter

Pigs

February 2025

Edited by Ciarán Carroll

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

Peadar Lawlor looks at the energy requirements of the modern sow in 2025 and explains how you can increase your energy intakes without increasing physical feed intake.

Kieran Keane looks at the results from the newly established feed lab at Moorepark and notes that some batches of cereals have been lower in protein this year so it might be time to review your diets if you haven't done so recently.

Gerard McCutcheon looks at farm insurance and highlights how sometimes the devil is in the detail. He outlines the key things to look out for so that can you make sure that your farm and stock are fully covered.

The "back page" has a number of interesting updates and events, including a request for good practices for the Welfarmers project and save the dates for some Teagasc Pig Welfare Workshops coming up in April and this year's Irish Pig Health Symposium which takes place on April 8th. There's also a link to a very useful infographic on the use of pig slurry on tillage land.

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Teagasc
Agriculture and Food Development Authority

Meeting the energy requirements of lactating sows in 2025

Peadar Lawlor, Moorepark

Born alive on Irish pig farms has increased by ~4 pigs/litter in the last 20 years and by 2.2 pigs/litter in the past 10 years, alone. It's not surprising then that optimising nutrition during lactation has become even more essential than ever. The physical intake of our sows must be high and there is also a case for increasing the nutrient density in lactation diets to help rear these large litters to respectable weaning weights while at the same time avoiding excessive weight loss in sows during lactation with all its negative implications.

What are the energy requirements of a sow during lactation?

The energy and nutrient requirements of lactating sows are calculated from the body weight of the sow (Maintenance component), milk yield (Production), loss in body weight (mobilisation of body tissue) during lactation.

1. **Maintenance** requirement is quite modest. For a sow with an empty weight of 220kg this is 28.1 MJ DE per day

2. M**ilk production** is the big determinant of the energy and nutrient requirement of lactating sows. Milk production is estimated indirectly from the weight gain of the litter during lactation. This in turn is influenced by the number of pigs weaned by the sow and their average weaning weight. Lactation length will also influence the energy and nutrient requirement of a sow on a daily basis during lactation.
   As a rule of thumb, every 0.5 kg change in the average pig weight at weaning increases the sow's energy requirement for milk production by ~ 7 to 8 MJ DE/day (increases with higher litter size per sow). Likewise, every extra pig weaned per litter increases the energy requirement for milk production by ~6 to 8 MJ DE/day (increases with higher average piglet weaning weight).

3. **Loss in body weight:** Each 1 kg of body weight loss during lactation contributes 12.5 MJ DE to the energy requirements of the sow over an entire lactation. Therefore, for every 10 kg weight loss in a sow during lactation there is reduction in the sow feed energy requirement of ~4.5 MJ DE/day. Although, an important source of energy for the sow during lactation, it is important that weight loss during lactation should not be greater than 5% (~10 kg) for first parity sows and 10% (~22 kg) for older parities if early returns to oestrus, high farrowing rate and a high subsequent litter size are to be achieved.

4. **Total lactation Energy Requirement = Maintenance + Milk production - Loss in body weight**

Pigs

Table 1 shows the total average daily energy requirement (MJ DE / day) of sows for a 28 day lactation and how it changes with increasing average piglet weaning weight and increasing number of pigs weaned per litter.

Table 1. Daily Energy Requirement (MJ DE / day) of sows during a 28 day Lactation depending on number of pigs weaned per sow and average piglet weaning weight

		Average piglet weaning weight (Kg)			
		7.0	**7.5**	**8.0**	**8.5**
Average No. of pigs weaned per litter	**13.0**	107.1	114.2	121.3	128.3
	13.5	110.2	117.5	124.8	132.2
	14.0	113.2	120.8	**128.4**	136.0
	14.5	116.3	124.1	132.0	139.9

* Every 10 kg weight loss in a sow during lactation reduces the sow's feed energy requirement of ~4.5 MJ DE/day. But sow weight loss during lactation should not exceed 10% for sows and 5% for gilts.

By way of example using Table 1 above, a sow weaning 14 piglets at an average weight of 8.0kg has a daily energy requirement during a 28 day Lactation of 128.4 MJ DE / day. However, allowing this sow to lose 10% (22kg) from its empty weight during lactation will contribute 9.9 MJ DE / day to the sow's energy demand. Therefore, the average daily energy provided from feed must be 118.5 MJ DE/day (128.4 – 9.9). If feeding a standard diet containing 14.2 MJ DE/kg then this sow would need to have an average daily feed intake of >8.3kg. However, if feeding a higher energy diet of 15 MJ DE/kg then an average daily feed intake of 7.9kg will achieve the same energy intake from feed. Failure to achieve these feed intakes means that sows will lose excessive weight during lactation and/or milk yield will be depressed. The follow-on from this is reduced reproductive performance in sows for the next parity and/or reduced piglet weaning weight.

In Moorepark we have been feeding a lactation diet containing ~15MJ DE/kg for the past ~8 years now. Our lactation feeding curve provides a potential average daily feed intake of 8.8kg (133 MJ DE) /day during a 28 day lactation. The average weaning weight of pigs on the unit is currently 8.6kg. What's more, our average piglet birth weight is >1.4kg which we believe is also be a result of the high energy intakes being achieved during lactation. Had we still been feeding a 14.2 MJ DE/kg lactation diet then an average daily lactation feed intake of 9.3kg would have been necessary, whereas because we feed a 15.0 MJ DE/kg lactation diet less physical intake (8.8kg/day) is necessary to achieve the same energy intake. It is also important to note that weight loss in sows during lactation is minimal currently in Moorepark meaning that sows are weaned in exceptionally good condition. Feeding a 15MJ DE/kg lactation diet means that you can achieve a target energy intake with ~ 0.5kg/day less physical intake of feed. This certainly helps in achieving high target daily energy intakes during lactation, however, achieving high physical feed intakes of feed during lactation is always a must. In the next issue we will explore how we can promote high physical lactation feed intake in sows.

Adapt your diets for lower protein cereals

Kieran Keane, Moorepark

It's been apparent for some time that the 2024 harvest of cereals seem to be lower in crude protein than most recent harvests. The reasons for this may be attributed to higher yields diluting the available nitrogen, or perhaps less nitrogen being supplied during the season. But what are the effects of these lower protein ingredients and what can pig producers do to counteract them? Commercial mills will have adapted their formulas to allow for changes in real time but it's possible some home millers may be using older formulas. Here are some results from the Moorepark Feed Nutrition Lab on different cereals.

Barley

The average crude protein across all 2023 harvested barley samples analysed in the lab was 9.85% and to date the 2024 samples average Crude Protein (CP) is 9.25%. The average dry matter is lower too; average for 2023 harvested samples was 87.7% and the average 2024 sample was 86.9%. It isn't just Irish and UK barley that is low in CP this year, we are seeing a decline in protein in samples from all sources. We are however seeing some very low results for CP in barley samples. The average across the lowest half of 2024 harvest sample results is only 8.8% CP. Figures like this don't appear on most nutritional evaluation tables for ingredients. 10% was the CP value for barley which was used in Moorepark as standard for formulation until recently.

Wheat

Wheat samples have shown a similar decline in protein levels. Average CP in a 2023 sample was 10.48%. However the 2024 samples have averaged only 9.8% to date. Dry matter is also slightly lower in the 2024 samples. Again the lower half of the CP values for 2024 average just 9.4% CP, which is a long way shy of the 10.5% formulation value we used to use as standard in Moorepark.

Maize

We have analysed samples of maize from Europe and North and South America and it can be harder to predict with the varied sources which samples belong to which growing season. However the maize samples we have analysed seem to consistently have a CP average of 7.27%. Formulation value we used to use in Moorepark was 8.15% CP.

How these results affect formulations

So with wheat, barley and maize making up approx. 80% of a lot of pig diets and each is potentially about 1% below our old formulation values for crude protein, it stands to reason that the resultant diet could be approx. 0.8% down on dietary CP. So if your recipes/formulations have not changed in the last 6 months it could be that you are now supplying up to 1% less crude protein to pigs than you were last year.

Finisher Diets

For example the standard Moorepark Finisher diet which was formulated to 16% CP (on old values) and has an ingredient cost of €301/t. If you were to use the 2024 average CP values for wheat and barley the dietary crude protein would come out at 15.5%. So if the formulation isn't changed to reflect the reduced protein levels in those ingredients then the resultant diet is down 0.5% in crude protein. However if we use some of the poorer results from above and the 8.8% CP barley and the 9.4% CP wheat was in the silos the resultant diet comes out at only 15.1% CP.

In both scenarios above there is also going to be less lysine and other amino acids in these diets than when formulated. Having lower dietary crude protein and amino acids will have adverse effect on finisher growth and FCE. At the moment the price difference between grains and soya is the smallest it has been for a number of years. So readjusting soya levels in the diet and returning to a dietary CP of 16% from 15.1% would cost an extra €3.41/t. Feeding the 15.1% CP diet would have affected performance in the finishers so reformulating and paying a bit extra for feed is likely the cheaper option in the long run.

Lactating Diets

The lactating diet in Moorepark discussed in Peadar's article above was formulated to 17% CP (on old values). When the CP values for the average 2024 harvested grains are applied the dietary CP comes out at 16.4%. If the lower CP values are applied then the dietary CP drops to 16.1%. Again there would be less lysine and other amino acids present in the diet. Undersupply of protein and lysine to lactating sows can lead to lower milk yield and excessive weight loss in the farrowing room. Interestingly in this scenario when reformulated with the actual CP values given for these cereals the diet didn't become more expensive as some soya oil was removed as extra soya was included.

In Conclusion

If your recipes/formulations have not changed in the last 6 months make sure you have a close look at them with your nutritionist. Undersupply of protein will lead to lower FCE in growing pigs and lower milk yield in lactating sows. The cost of reformulating to add back more protein will be far smaller than the potential loss in production costs.

Insurance Cover – the Devil is in the detail, make sure you're properly covered!

Gerard McCutcheon, Oak Park

Correct insurance cover is vital to protect your business if an accident or tragedy occurs on the farm. It is important to understand your insurance cover when you pay your annual premium.

Areas of Insurance Cover for Pig Farms

There are three main areas that should be covered when you insure your pig farm:

1. Stock value
2. Building replacement value
3. Loss of profits or Consequential loss

You should also have cover for public liability and employer's liability, personal accident and also wages/salary cover. Each area should be discussed with your insurance company annually as you renew your policy to ensure that your cover is suitable for your business.

Insuring Stock Values

When insuring the stock on a pig farm their value must be estimated. This will vary depending on the pig sale value and the feed cost on your farm.

The value of piglets, weaners and finishers will vary in response to the pig sale price, feed performance and feed costs (€/tonne). Assuming a sale weight of 118kg LW and a 76.5 % kill-out will allow a valuation for these pigs as shown in the table below. This values the pigs at a sale value minus the feed cost with some allowance for the other variable costs to bring the pig to sale weight.

Table 1. Value of a Piglet, Weaner and Finisher based on two sale prices:

	Sale Price in c/kg DW	
	200c/kg	220c/kg
Piglet value	€82	€100
Weaner value	€96	€114
Finisher value	€136	€154

Assumes a finisher FCE of 2.7 and a weaner FCE of 1.8. Transfer to finisher at 38kg LW. Creep/starter diet @ €1040/t, Link @ €760/t, Weaner @ €405/t, Finisher @ €340/t.

The average sale price for pigs in 2024 was c.220 c/kg DW. If we take the 220 c per kg sale price we get a €2,378 stock value per sow plus progeny (with sows valued at €500 each). This figure is €2,130 per sow plus progeny if the finisher sale price is 200 cent per kg DW.

For insurance cover of stock you need to decide what other risks are you to insure against. Cover should also be sought to cover the value of pigs being transported from the farm (pigs in transit) if you transport your own pigs for sale. Again, discuss this with your insurance company as you renew your policy.

Insuring Farm Buildings

When you insure a farm building you are really insuring the replacement cost of the farm building if it was damaged or destroyed, not the current value. For example, if you have a pig finisher house with 1000 places and it was built ten years ago. Its book value is probably only €100,000 today. The current cost of new finisher accommodation is at least €550 (excluding VAT) per finisher place – so the replacement cost of the building is 1000 by €550 – so the building should be insured for a value of €550,000. This valuation should be done for **all** your buildings on the pig farm (including feed mill if one is present). Be careful to inquire if your building cover includes *fixtures and fittings* (e.g. feed systems and feeders, pen divisions, ventilation equipment, etc.) to be 100 per cent clear on what cover you are getting for your premium.

If you only insure the building for its current value you will get less than 20% of the cost of replacing it (i.e. €100,000/€550,000 multiplied by 100). This will not replace the building if the building was destroyed. The overall figure is probably now in the region of €7,100 per sow plus progeny (based upon €1,200/dry sow place, €3,500 per farrowing place, €300 for first and second stage weaner place and €550 per finisher place).

Check the risk cover that you require insurance for; e.g. fire, storm damage, lightning, explosion, suffocation etc. You should also discuss cover for removal and disposal of dead stock or building debris in the event of a fire or other tragedy on the farm. This is very relevant if there are any buildings with asbestos roofing on your farm.

If you have staff accommodation on site this should be highlighted to your insurance provider.

Loss of Profits or Consequential Loss

The cost of profit loss, or consequential loss is usually defined as the gross margin/profit that is lost as a consequence of some tragic event that may be insured. Read your policy and/or ask your insurance company for an explanation of how the cover is defined and what it covers. As pig prices and feed prices fluctuate the gross profit will vary from year to year. The gross margin figure in your business accounts for the most recent two years is a good indication of what your cover should be.

The next decision is what length of cover you may require. If you have a fire on your farm and need to depopulate the herd, the time that you are out of production could well be a year, but if you run into planning issues or other problems this could even be longer. **It is important to know when the consequential loss is triggered.** It is usually the date of the incident. The period of cover needs to be considered. A year may suffice but if there is a fire or building collapse it could take a lot longer than a year to be fully operational again.

Conclusion

Adequate farm insurance is essential if an unfortunate event occurs on your farm. It is important to review the cover for your building costs, the values of stock and consequential loss each year.

Unfortunately accidents do happen, and you need good insurance cover if your business is to survive.

Promoting the use of pig slurry on tillage land

The Teagasc Pig Development and Tillage Departments have been working closely to improve the connectivity between pig and tillage farmers. The areas we are focusing on includes:

Infographics: developed an infographic on the use of pig slurry on tillage ground. This was distributed at the recent Teagasc Winter Crop walks and will be used at future discussion groups, farm walks and Signpost Farm meetings.

"Pig Manure a Valuable Fertiliser" booklet: previously produced by Teagasc PDD, this is currently being revised with a tillage focus.

Signpost Farms: Signpost farm walk on the John Crowley's farm near Ferns on March 6. A key feature of the day will be on application/incorporation of pig slurry ahead of planting spring barley.

Video: produce a video on the value/savings from replacing some of the chemical fertiliser requirements with pig slurry.

Podcast: proposal to run a joint Pig Edge/Tillage Edge podcast on the value and use of pig slurry on tillage ground.

Newsletter: article(s) promoting the use of pig slurry on tillage ground.

Slurry Storage Tanks: looking at the logistics of tillage farmers putting slurry storage tanks on-farm, perhaps in a joint funding arrangement with pig farmers. Grant aid (60%) is available for such tanks under TAMS.

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. Let us know if you have a good practice by completing this short 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.

Teagasc Pig Welfare Workshops

The Teagasc Pig Development Department are running a number of Pig Welfare Workshops in early April. 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 1st), Teagasc Tullamore (April 2nd) and Teagasc Ballyhaise (April 3rd). If you are interested in attending or want to send someone on the course please contact Charlotte 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. Save the date now!

FarmAdapt Project

FarmAdapt is a DAFM funded project involving collaboration between Teagasc, Technological University Dublin and University College Dublin. The project is investigating Irish farmers' perceptions and adaptations to climate change, a critical issue for the future of Irish agriculture. The project coordinators are looking for farmers to participate in a focus group on climate adaptation in the Irish agriculture sector and are organising focus groups on two topics; Adaptation to Climate Change and GHG, Nitrogen and Phosphorus Reduction Practices. If you are interested in participating, please contact Ammara Batool via email on Ammara.Batool@tudublin.ie