Agriculture and Food Development Authority

National Pig Herd Performance Report 2019

Teagasc Pig Development Department

Teagasc

Agriculture and Food Development Authority

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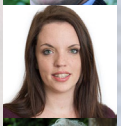

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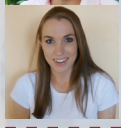

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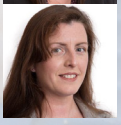

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Introduction

This report is the detailed analysis of the performance of the pig farms that participated in the Teagasc e-Profit Monitor (*ePM*) recording system in 2019.

The data available and included in this analysis is from a total of 94 herds representing over 78,000 sows or 52% of the total Irish sow herd. The average herd size included in this database is 831 sows and ranged from less than 100 sows to over 2,500 sows.

The performance parameters in this report are the weighted average (*weighted by the herd size*) of the participating herds. This weighting is done to make allowance for the large range in herd size of the participating herds.

Herds participating in the ePM recording system and engaging with the advisory support of the staff of the Teagasc Pig Development Department continue to demonstrate improvements in technical performance each year.

The report also includes some analysis of production costs in a number of the participating herds. An increase in participation in this aspect of the system may well provide a more accurate picture of the actual costs across the sector. There are indications that those herds that routinely record the full costs of production are the herds with the highest levels of technical efficiency. This would suggest that these herds have lower costs of production than herds which do not check their costs of production routinely.

The Teagasc Pig Development Department welcome more herds to participate in benchmarking using the ePM. Any new herds that wish to participate should contact any of the Knowledge Transfer personnel listed on the inside cover of this booklet

Technical Performance 2019

Table 1: Sow Productivity	2017	2018	2019
Number of Herds	107	104	94
Average Herd Size	728	762	831
Average Maiden Gilts (%)	11.6	12.4	12.2
Litters per Sow per Year	2.36	2.34	2.28
Average Weaning Age Days	29	30	31
Empty Days per Litter	14	14	15
Number Born Alive per Litter	13.50	13.69	14.12
Number Born dead per Litter	0.92	0.96	1.06
Piglet Mortality (%)	10.7	11.1	11.3
Weaner Mortality (%)	2.91	2.90	2.89
Finisher Mortality (%)	2.21	2.43	2.67
Number of pigs produced per sow per year	27.01	26.9	26.8
Sow culling rate per annum (%)	49.3	49.2	48.3
Sow mortality per annum (%)	5.2	6.3	6.7
Feed per sow per year (tonnes)	1.30	1.31	1.35

Commentary

The number of pigs born alive per litter rose again this year. It was the first year that the born alive was over 14. One major output figure to measure sow performance is the number of pigs produced per sow per year. This is the number of pigs born alive minus all deaths in a year divided by the average number of sows in the herd. The calculation is adjusted to allow for an annual output if the time period is not a year.

The rise to 14.12 pigs born alive per litter did not increase the number of pigs produced per sow per year as the number of litters per sow per year dropped to 2.28 in 2019.

The output of pig meat per sow per year increased slightly from 2,319 kg to 2,324 kg because the average live weight and dead weight of pigs sold in 2019 increased.

Table 2: Growing Pig Performance	2017	2018	2019
Number of Herds	87	84	90
Average Weaning Weight (kg)	7.0	7.0	7.0
Average Live Weight at Sale (kg)	110.8	112.6	113.5
Average Dead Weight at Sale (kg)	84.6	86.2	86.7
Kill Out (%)	76.4	76.5	76.4
Daily Feed Intake (g)	1,727	1,760	1,767
Average Daily Gain (g)	708	717	724
Feed Conversion	2.44	2.43	2.44

Commentary

The average dead weight in recorded herds increased in 2019 to 86.7 kg. There was an increase in growth rate from weaning to sale (*717 to 724 g/day*), and there was an increase of 0.01 in the Feed Conversion from weaning to sale compared to 2018.

The average output of pig meat per sow per year was 2,324 kg in 2019. This amount of pig meat was produced using 8,314 kg of feed. This means it took 3.58 kg of feed to produce one kg of pig meat. The Teagasc Pig Department set a target of using 3.5 kg of feed to produce one kg of pig meat and this target is achievable with good management. Benchmarking performance against the top performing herds helps identify areas that may require improvement on each farm.

Table 3: Weaner Performance	2017	2018	2019
Average Weaning Weight (kg)	7.0	7.0	7.0
Average Transfer/Sale Weight (kg)	38.4	38.7	37.9
Creep Feed per Weaner (kg)	3.8	3.6	3.7
Link Feed per Weaner (kg)	6.0	7.3	7.4
Weaner Feed per Weaner (kg)	47.5	46.6	45.9
Total Feed per Weaner (kg)	57.3	57.5	57.0
Average Daily Feed Intake (g)	879	874	879
Average Daily Gain (g)	490	494	481
Feed Conversion	1.79	1.77	1.84

Commentary

On most farms in the records the weight of weaners transferred to finishing accommodation is an estimated weight rather than actual weights at transfer. For this reason there may be a certain level of inaccuracy in the weaner and finisher performance figures. The true performance is in the weaning to sale figures but the breakdown in the weaner and finisher section is useful information.

There has been a slight decrease in the weaner feed fed to weaners compared to 2018. The transfer weight is down slightly also.

The Feed Conversion increased to 1.84 from 1.77 in 2018. This drop in feed performance may be linked to some feed ingredient issues during 2019.

Table 4: Finisher Performance	2017	2018	2019
Average Weaner Transfer Weight (kg)	38.4	38.7	37.9
Average Live Weight at Sale (kg)	110.8	112.6	113.5
Average Dead Weight at Sale (kg)	84.6	86.2	86.7
Kill Out (%)	76.4	76.5	76.4
Average Daily Feed Intake (g)	2,304	2,407	2,422
Average Daily Gain (g)	866	885	904
Feed Conversion	2.66	2.72	2.68

The same qualification applies to finisher performance data as weaner transfer weights are usually estimated on most Irish pig farms. Finisher growth rates increased from 885 to 904 g/day from 2018 to 2019. There was an improvement in Feed Conversion from 2.72 to 2.68 in 2019.

Pig slaughter weights increased by 0.9 kg live weight and 0.5 kg dead weight compared to 2018.

Total feed per pig from weaning to sale was as follows:

	2017	2018	2019
Creep	3.8	3.6	3.7
Link	6.0	7.3	7.4
Weaner	47.5	46.6	45.9
Finisher	192.6	201.0	202.8

Production Costs 2019

Table 5: Feed and Non-Feed Costs			
	Cost per kg dead weight (c)		
	2017	2018	2019
Feed	100.6	105.6	107.5
Non-feed Costs excluding Building and Financial Costs			
Healthcare	6.3	5.7	6.2
Heat, Power, Light	4.2	4.1	3.8
Transport	1.3	1.6	1.9
Artificial Insemination	1.9	1.8	1.9
Manure	1.7	1.8	1.8
Labour / Management	14.4	14.1	15.1
Repairs	3.0	2.4	2.7
Administration	0.9	1.2	1.2
Environment	0.5	0.4	0.5
Insurance	1.0	1.2	1.3
House Rental	2.5	1.9	1.7
Contract Finishing Costs	2.4	2.5	2.3
Water	0.5	0.4	0.5
Dead Pig Disposal	0.8	0.7	0.7
Stock Depreciation	1.8	2.1	2.1
Miscellaneous	1.2	1.3	1.2
Total Non-feed Costs excluding Building and Financial Costs	44.4	43.2	44.9

Commentary

Most of the costs are very similar to 2018. The labour / management cost rose a little which may reflect more farms including more of the home labour costs for their farms. Costs such as house rental, contract finishing costs and water are costs that may not occur on all farms.

Table 6: Building and Financial Costs			
	Cost per kg dead weight (c)		
	2017	2018	2019
Building Depreciation	4.3	4.5	4.3
Interest	1.4	1.4	1.4
Building and Financial	5.7	5.9	5.7

Commentary

Too few farms include data on their interest payments and building depreciation to obtain a reliable indication of these costs. Each farm should know their building depreciation and interest costs from their annual financial accounts. These are a real cost and more farms should include them in their input data if they are serious about knowing their total production cost.

The building depreciation cost is quite low based on the cost of new pig buildings. The low building depreciation may reflect a lack of capital investment in many pig farms over the last decade.

Table 7: Total Cost of Production			
	Cost per kg dead weight (c)		
	2017	2018	2019
Feed	100.6	105.6	107.5
Non-feed Costs excluding Building and Financial Costs	44.4	43.2	44.9
Building and Financial Costs	5.7	5.9	5.7
Total	150.7	154.7	158.1

Commentary

With a repayment (*capital + interest*) cost of 6.2 cent per kg pig producers needed 158.6 cent per kg dead weight to cover all payments in 2019. They had a good year in 2019 as the average price paid in the year was 166 cent per kg dead weight. These costs need to be unit specific to be useful for comparison with these "average" figures.

Top 25% of Herds

Table 8: Top 25% of herds selected on the basis of the Number of Pigs produced per sow per year		
	Top 25% 2019	Average 2019
Number of Herds	23	94
Average Herd Size	716	831
No. pigs produced per sow per year	28.9	26.8
Litters per sow per year	2.27	2.28
Average weaning age (days)	29	31
Empty days per litter	14	15
No. born alive per litter	14.81	14.12
No. born dead per litter	1.01	1.06
Piglet Mortality (%)	9.4	11.3
Weaner Mortality (%)	2.44	2.89
Finisher Mortality (%)	2.14	2.67
Sow Culling Rate (%)	47.9	48.3
Sow Mortality (%)	5.3	6.7
Feed per sow per year (tonnes)	1.38	1.35

Commentary

The herds in the top quartile of herds selected on the number of pigs produced per sow per year produced 2.1 more pigs per sow per year than the average herds. This greatly increases the profitability of these farms if they can manage their costs of production well.

The extra pigs produced on these Top 25% of herds is achieved by a higher born alive per litter, and a lower mortality percentage at all stages of production. This may suggest better management of disease on these farms.

Table 9: Top 25% of herds selected on Feed Conversion Weaning to Sale		
	Top 25% 2019	Average 2019
Number of Herds	24	90
Average Herd Size	671	730
Average weaning weight (kg)	7	7
Average live weight at sale (kg)	113	113.5
Average dead weight at sale (kg)	86.4	86.7
Kill out (%)	76.5	76.4
Average daily feed intake (g)	1,678	1,767
Average daily gain (g)	736	724
Feed conversion	2.28	2.44
Average feed price per tonne (€)	303	300
Feed per pig weaning to sale (*kg*)		
Creep	3.2	3.7
Link	9.0	7.4
Weaner	47.9	45.9
Finisher	182.0	202.8
Total	242.1	259.8

Commentary

The figures above show that the Top 25% of herds selected on the basis of Feed Conversion from weaning to sale used 17.7 kg of feed per pig less than the feed used on the average herds.

The sale weight of pigs on the Top 25% performing herds was only 0.5 kg live weight and 0.3 kg dead weight lighter than the weights achieved on the average herds. The feed used was slightly more expensive on the Top 25% of herds as they used more link and weaner feed and less finisher feed to grow the pigs. By using less feed the Top 25% saved €4.81 per pig sold (*based on a finisher feed cost of €272/ tonne and a calculation of 17.7 kg by 27.2 c/kg*). Their pig was 0.3 kg lighter so their pigs were valued at €0.5 less than the average finishers sold at 86.7 kg dead weight (*based on 0.3 by €1.66/kg*). Therefore the net benefit for the Top 25% is €4.31 per pig sold in feed savings which is a reduced feed cost of 5 cent per kg.

Top 10% of Herds

Table 10: Top 10% of herds selected on the basis of the Number of Pigs produced per sow per year		
	Top 10% 2019	Average 2019
Number of Herds	10	94
Average Herd Size	682	831
No. pigs produced per sow per year	30.2	26.8
Litters per sow per year	2.33	2.28
Average weaning age (days)	29	31
Empty days per litter	12	15
No. born live per litter	14.85	14.12
No. born dead per litter	0.96	1.06
Piglet Mortality (%)	8.6	11.3
Weaner Mortality (%)	2.27	2.89
Finisher Mortality (%)	1.79	2.67
Sow Culling Rate (%)	49.1	48.3
Sow Mortality (%)	4.4	6.7
Feed per sow per year (tonnes)	1.32	1.35

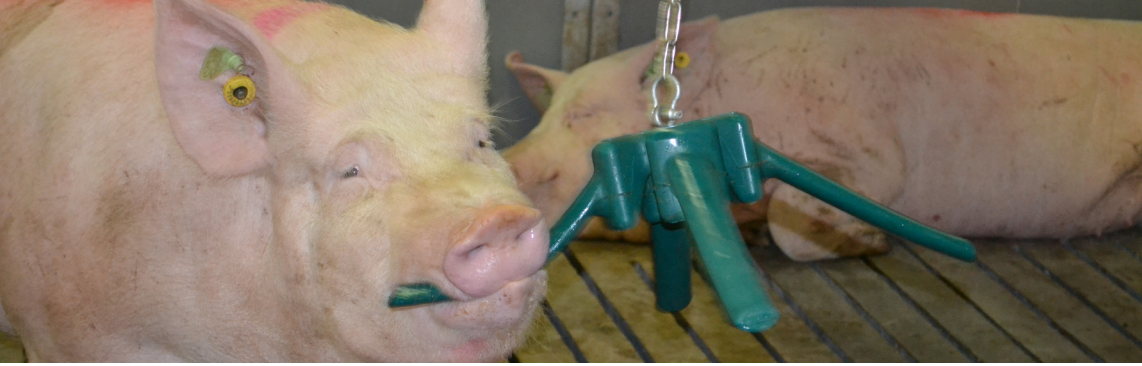
Commentary

The Top 10% of recorded herds selected on the basis of Number of Pigs Produced per sow per year produced 3.4pigs more than the average for all recorded herds.

These top performing herds had:

- A higher number of litters per sow per year
- Higher number of pigs born alive per litter: 0.73
- Lower mortality levels in piglets, weaners and finishers: 4.2%

Table 11: Top 10% of herds selected on the basis of Feed Conversion Weaning to Sale		
	Top 10% 2019	Average 2019
Number of Herds	10	90
Average Herd Size	604	730
Average weaning weight (kg)	7.2	7
Average live weight at sale (kg)	109.4	113.5
Average dead weight at sale (kg)	83.5	86.7
Kill out (%)	76.3	76.4
Average daily feed intake (g)	1,692	1,767
Average daily gain (g)	770	724
Feed Conversion	2.22	2.44
Average feed price per tonne (€)	300	300
Feed per pig weaning to sale (*kg*)		
Creep	3.1	3.7
Link	9.0	7.4
Weaner	46.1	45.9
Finisher	168.8	202.8
Total	227.0	259.8



Commentary

The Top 10%of recorded herds selected on the basis of Feed Conversion from weaning to sale had slaughter weights that were 4.1 kg lighter than the average sale weights for all herds. This gave the Top 10% of herds a 3.2 kg lighter carcase weight. The Top 10% achieved a much better Feed Conversion from weaning to sale – better by 0.22 (*i.e. 2.44 minus 2.22*).

The Top 10% of farms used 32.8 kg of feed less than the amount of feed required per pig on the average farms. If we allow a feed cost of €272/tonne (*assuming the saving was made in the finisher feed*) – this equates to a saving on feed of €8.92. The value of the lower dead weight is €5.31 (*3.2 kg by €1.66 per kg*). The net saving is €3.61 per pig sold for the Top 10%. These farms showed a better growth rate than the average herds also of 46 gram per day from weaning to sale.

Trends in Pig Herd Performance

Table 12: Pig Meat Produced per Sow per Year								
	2012	2013	2014	2015	2016	2017	2018	2019
No. pigs produced per sow per year	24.5	25.2	25.3	24.8	26.25	27.01	26.9	26.8
Average Slaughter weight (kg)	79.3	80.6	81.1	83.0	83	84.6	86.2	86.7
Pig Meat Produced per Sow per Year (kg)	1,943	2,031	2,052	2,058	2,179	2,285	2,319	2,324

Commentary

The quantity of pig meat produced per sow per year has increased by 13% since 2015 due to a combination of increased number of pigs produced per sow per year and increased carcase weights.

Table 13: Growing Pig Performance						
	2014	2015	2016	2017	2018	2019
Average Daily Gain (g)	670	694	697	708	717	724
Feed Conversion	2.49	2.43	2.42	2.44	2.43	2.44
Sale Weight Live (kg)	106.2	108.7	108.6	110.8	112.6	113.5

Commentary

Since 2015 growth rates from weaning to sale have increased by over 4%. The Feed Conversion has remained quite constant even though the live weight at sale increased by over 4%. There is still a lot of room for improvement in these figures.

Table 14: Production costs per kg dead weight (c)						
	2014	2015	2016	2017	2018	2019
Feed	117	108	102	101.6	105.6	107.5
Total Non-feed Costs excluding Building and Financial Costs	36.9	39.6	41.3	44.4	43.2	44.9
Building and Financial Costs	6.0	5.8	6.6	5.7	5.9	5.7
Total	159.9	153.4	149.9	150.7	154.7	158.1

Commentary

Feed normally represents about 70% of production costs as reported in the Teagasc ePM recorded herds. Feed costs per tonne fluctuate in line with feed ingredients which will affect the feed cost per kg from year to year. The feed costs each year are monitored separately in the Teagasc Monthly Feed and Pig Price Monitor. This helps validate the feed cost figures in the ePM on an on-going basis.

It is critical that each farm monitors its own production costs. These costs are essential to the overall management of any pig farm business. Every farm can and should benchmark their herd performance and production costs on the ePM system. This allows each farm compare their performance figures with the figures shown in this booklet.

Talk to your Teagasc Advisor today on accessing the ePM to view and benchmark your own records.

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