

National Pig Herd Performance Report 2020

Teagasc Pig Development Department



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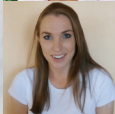
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Introduction

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 2020.

The data available and included in this analysis is from a total of 88 herds representing over 70,000 sows or 48% of the total Irish sow herd. The average herd size included in this database is 799 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

Table 1: Sow Productivity	2018	2019	2020
Number of Herds	104	94	88
Average Herd Size	762	831	799
Average Maiden Gilts (%)	12.4	12.2	12.6
Litters per Sow per Year	2.34	2.28	2.31
Average Weaning Age Days	30	31	30
Empty Days per Litter	14	15	15
Number Born Alive per Litter	13.69	14.12	14.26
Number Born dead per Litter	0.96	1.06	1.06
Piglet Mortality (%)	11.1	11.3	11.1
Weaner Mortality (%)	2.90	2.89	2.76
Finisher Mortality (%)	2.43	2.67	2.67
Number of pigs produced per sow per year	26.9	26.8	27.5
Sow culling rate per annum (%)	49.2	48.3	50.2
Sow mortality per annum (%)	6.3	6.7	7.2
Feed per sow per year (tonnes)	1.31	1.35	1.34

Commentary

The number of pigs born alive per litter rose again this year. A major Key Performance Indicator (KPI) 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 14.26 pigs born alive per litter combined with the increase in litters per sow per year (2.31 in 2020 compared to 2.28 in 2019) increase the number of pigs produced per sow per year to 27.5 in 2020.

The output of pig meat per sow per year increased also from 2,324 kg to 2,426 kg of the increased sow production and because the average live weight and dead weight of pigs sold in 2020 increased.



Table 2: Growing Pig Performance	2018	2019	2020
Number of Herds	84	90	88
Average Weaning Weight (kg)	7.0	7.0	7.0
Average Live Weight at Sale (kg)	112.6	113.5	115.3
Average Dead Weight at Sale (kg)	86.2	86.7	88.2
Kill Out (%)	76.5	76.4	76.5
Daily Feed Intake (g)	1,760	1,767	1,764
Average Daily Gain (g)	717	724	735
Feed Conversion	2.43	2.44	2.40

Commentary

The average dead weight in recorded herds increased in 2020 to 88.2 kg. There was an increase in growth rate from weaning to sale (724 to 735 g/day), and there was a decrease of 0.04 in the Feed Conversion from weaning to sale compared to 2019.

The average output of pig meat per sow per year was 2,426 kg in 2020. This amount of pig meat was produced using 8,488 kg of feed. This means it took 3.50 kg of feed to produce one kg of pig meat. The figure 3.5 kg of feed to produce one kg of pig meat is impressive when you consider that it ranged between 3.66 and 3.79 in the ten years from 2001 to 2010.

Benchmarking performance against the top performing herds helps identify areas that may require improvement on your farm.



Table 3: Weaner Performance	2018	2019	2020
Average Weaning Weight (kg)	7.0	7.0	7.0
Average Transfer/Sale Weight (kg)	38.7	37.9	39.2
Creep Feed per Weaner (kg)	3.6	3.7	3.7
Link Feed per Weaner (kg)	7.3	7.4	9.2
Weaner Feed per Weaner (kg)	46.6	45.9	46.5
Total Feed per Weaner (kg)	57.5	57.0	59.4
Average Daily Feed Intake (g)	874	879	913
Average Daily Gain (g)	494	481	497
Feed Conversion	1.77	1.84	1.85

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 an increase in the weaner feed fed to weaners compared to 2018. The transfer weight has also increased to 39.2 kg.

The Feed Conversion slightly increased to 1.85 from 1.84 in 2019. The increased transfer weight to the finisher section is at the highest it has been over the past twenty years.



Table 4: Finisher Performance	2018	2019	2020
Average Weaner Transfer Weight (kg)	38.7	37.9	39.2
Average Live Weight at Sale (kg)	112.6	113.5	115.3
Average Dead Weight at Sale (kg)	86.2	86.7	88.2
Kill Out (%)	76.5	76.4	76.5
Average Daily Feed Intake (g)	2,407	2,422	2,391
Average Daily Gain (g)	885	904	921
Feed Conversion	2.72	2.68	2.60

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 904 to 921 g/day from 2019 to 2020. There was a very good improvement in Feed Conversion from 2.68 to 2.60 in 2020.

Pig slaughter weights increased by 1.8 kg live weight and 1.5 kg dead weight compared to 2019.

The feed fed per pig from weaning to sale in 2020 was as follows:

	2018	2019	2020
Creep	3.6	3.7	3.7
Link	7.3	7.4	9.2
Weaner	46.6	45.9	46.5
Finisher	201.0	202.8	198.9



Production Costs 2020

Table 5: Feed and Non-Feed Costs

	Cost per kg dead weight (c)		
	2018	2019	2020
Feed	105.6	107.5	105.4
Non-feed Costs excluding Building and Financial Costs			
Healthcare	5.7	6.2	6.6
Heat, Power, Light	4.1	3.8	4.3
Transport	1.6	1.9	1.6
Artificial Insemination	1.8	1.9	1.9
Manure	1.8	1.8	1.8
Labour / Management	14.1	15.1	15.9
Repairs	2.4	2.7	3.2
Administration	1.2	1.2	1.4
Environment	0.4	0.5	0.4
Insurance	1.2	1.3	1.5
House Rental	1.9	1.7	1.7
Contract Finishing Costs	2.5	2.3	2.5
Water	0.4	0.5	0.5
Dead Pig Disposal	0.7	0.7	0.8
Stock Depreciation	2.1	2.1	2.3
Miscellaneous	1.3	1.2	1.3
Total Non-feed Costs excluding Building and Financial Costs	43.2	44.9	43.5

Commentary

Most of the costs are quite similar to 2019. 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 and contract finishing costs are costs that may not occur on all farms and are excluded from the “total” figure of 43.5 cent per kg deadweight shown above.



Table 6: Building and Financial Costs

	Cost per kg dead weight (c)		
	2018	2019	2020
Building Depreciation	4.5	4.3	4.7
Interest	1.4	1.4	1.3
Building and Financial	5.9	5.7	6.0

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)		
	2018	2019	2020
Feed	105.6	107.5	105.4
Non-feed Costs excluding Building and Financial Costs	43.2	44.9	43.5
Building and Financial Costs	5.9	5.7	6.0
Total	154.7	158.1	154.9

Commentary

With a repayment (*capital + interest*) cost of 6.3 cent per kg pig producers needed 155.2 cent per kg dead weight to cover all payments in 2020. They had a good year in 2020 as the average price paid in the year was 176 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% 2020	Average 2020
Number of Herds	24	88
Average Herd Size	657	799
No. pigs produced per sow per year	30.2	27.5
Litters per sow per year	2.34	2.31
Average weaning age (days)	27	30
Empty days per litter	13	15
No. born alive per litter	15.04	14.26
No. born dead per litter	0.96	1.06
Piglet Mortality (%)	10.0	11.1
Weaner Mortality (%)	2.13	2.76
Finisher Mortality (%)	2.00	2.67
Sow Culling Rate (%)	49.1	50.2
Sow Mortality (%)	6.1	7.2
Feed per sow per year (tonnes)	1.38	1.34

Commentary

The herds in the top quartile of herds selected on the number of pigs produced per sow per year produced 2.7 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% 2020	Average 2020
Number of Herds	18	77
Average Herd Size	664	751
Average weaning weight (kg)	7	7
Average live weight at sale (kg)	111.2	115.3
Average dead weight at sale (kg)	84.8	88.2
Kill out (%)	76.3	76.5
Average daily feed intake (g)	1736	1764
Average daily gain (g)	769	735
Feed conversion	2.26	2.40
Feed per pig weaning to sale (kg)		
Creep	3.3	3.7
Link	7.4	9.2
Weaner	41.7	46.5
Finisher	182.4	198.9
Total	234.8	258.3



Commentary

The figures above show that the Top 25% of herds selected on the basis of Feed Conversion from weaning to sale used 23.5 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 4.1 kg live weight and 3.4 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 less link and weaner and finisher feed to grow the pigs. By using less feed the Top 25% saved €6.58 per pig sold (*based on a finisher feed cost of €280/ tonne and a calculation of 23.5 kg by 28 c/kg*). Their pig had a 3.4 kg lighter carcass weight so their pigs were valued at €5.98 less than the average finishers sold at 88.2 kg dead weight (*based on 3.4 by €1.76/kg*). Therefore the net benefit for the Top 25% is €0.60 per pig sold in feed savings which is a reduced feed cost of less than one 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% 2020	Average 2020
Number of Herds	10	88
Average Herd Size	710	799
No. pigs produced per sow per year	30.6	27.5
Litters per sow per year	2.33	2.31
Average weaning age (days)	27	30
Empty days per litter	13	15
No. born live per litter	14.97	14.26
No. born dead per litter	0.98	1.06
Piglet Mortality (%)	8.6	11.1
Weaner Mortality (%)	1.86	2.76
Finisher Mortality (%)	1.83	2.67
Sow Culling Rate (%)	48.2	50.2
Sow Mortality (%)	5.3	7.2
Feed per sow per year (tonnes)	1.37	1.34



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: 0.71
- 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% 2020	Average 2020
Number of Herds	10	77
Average Herd Size	628	751
Average weaning weight (kg)	7.3	7
Average live weight at sale (kg)	110.6	115.3
Average dead weight at sale (kg)	84.5	88.2
Kill out (%)	76.4	76.5
Average daily feed intake (g)	1729	1764
Average daily gain (g)	775	735
Feed Conversion	2.23	2.40
Feed per pig weaning to sale (kg)		
Creep	3.8	3.7
Link	5.9	9.2
Weaner	46.1	46.5
Finisher	173.4	198.9
Total	229.2	258.3



Commentary

The Top 10% of recorded herds selected on the basis of Feed Conversion from weaning to sale had slaughter weights that were 4.7 kg lighter than the average sale weights for all herds. This gave the Top 10% of herds a 3.7 kg lighter carcass weight. The Top 10% achieved a much better Feed Conversion from weaning to sale – better by 0.17 (i.e. 2.40 minus 2.23).

The Top 10% of farms used 29.1 kg of feed less than the amount of feed required per pig on the average farms. If we allow a feed cost of €280/tonne (assuming the saving was made in the finisher feed) – this equates to a saving on feed of €8.15. The value of the lower dead weight is €6.51 (3.7 kg by €1.76 per kg). The net saving is €1.64 per pig sold for the Top 10%. These farms showed a better growth rate than the average herds also of 40 gram per day from weaning to sale.



Trends in Pig Herd Performance

Table 12: Pig Meat Produced per Sow per Year

	2015	2016	2017	2018	2019	2020
No. pigs produced per sow per year	24.8	26.25	27.01	26.9	26.8	27.5
Average slaughter weight (kg)	83.0	83.0	84.6	86.2	86.7	88.2
Pig meat produced per sow per year (kg)	2,058	2,179	2,285	2,319	2,324	2,426

Commentary

The quantity of pig meat produced per sow per year has increased by 18% 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

	2015	2016	2017	2018	2019	2020
Average Daily Gain (g)	694	697	708	717	724	735
Feed Conversion	2.43	2.42	2.44	2.43	2.44	2.40
Live weight at sale (kg)	108.7	108.6	110.8	112.6	113.5	115.3

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 nearly 6%. There is still room for improvement in these figures.

Table 14: Production costs per kg dead weight (c)

	2015	2016	2017	2018	2019	2020
Feed	108	102	101.6	105.6	107.5	105.4
Total non- feed costs excluding building and financial costs	39.6	41.3	44.4	43.2	44.9	43.5
Building and financial costs	5.8	6.6	5.7	5.9	5.7	6.0
Total	153.4	149.9	150.7	154.7	158.1	154.9

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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