

ANALYSIS OF PRODUCTIVITY ON SELECTED DANBRED FARMS 2022

Jens Vinther

SEGES Innovation P/S

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Main conclusion

Productivity on sow farms using DanBred genetics improved from 34.4 to 34.6 weaned pigs/sow/year from 2021 to 2022 when looking at the weighted average. This is an increase of 0.5 weaned pigs/sow/year compared with 34.1 weaned pigs/sow/year as reported in the 2022 National Average Productivity Index. Productivity figures for DanBred weaner and finisher farms are roughly identical with the National Average Productivity Index.

Abstract

This analysis revealed progress in productivity on DanBed sow farms as weaned pigs/sow/year increased from 34.1 in 2021 to 34.6 in 2022 [1] when looking at the weighted average. This is 0.5 weaned pigs/sow/year more than 34.1 weaned pigs/sow/year as found in the National Average Productivity Index [1]. Productivity figures for weaner and finisher farms were roughly identical with those of the farms included in the National Average Productivity Index [1].

The average of top 5 sow farms using DanBred genetics weaned 42.0 pigs/sow/year; the top 5 weaner and finisher farms had a reference-daily gain of 539 g and 1,128 g, respectively. Reference-feed conversion for the top 5 finisher farms was 2.48 FUgp/kg gain. However, due to the low number of weaner and finishers farms included, KPI estimates are subject to some uncertainty. Nevertheless, analyses revealed very high levels of productivity among the top 5 farms.

Background

The data material used for this analysis is identical to the data material used for the 2022 National Average Productivity Index [1]. It includes a large amount of anonymous data and non-DanBred farms; consequently, some DanBred customers are not represented in this analysis as they could not be identified as DanBred farms. The report therefore outlines the general level of productivity and the level on the best sow farms, weaner farms and finisher farms that were positively identified as DanBred farms. The aim was to present status and trends for productivity on DanBred farms in 2022.

Materials and methods

The data material used is based on the data material of the 2022 National Average Productivity Index [1] and on lists of DanBred farms supplied by DanBred P/S and is based on a subset of the farms identified as DanBred customers in 2022. Some of the farms included in the original data material were anonymized and could therefore not be confirmed as DanBred farms.

The top 5 sow farms were selected according to pigs weaned/sow/year and the top 5 weaner farms and top 5 finisher farms were selected according to daily gain.

Data validation and calculation of KPIs are based on the method used in the National Average Productivity Index 2022 [1]. Medians are the best method for describing average productivity KPIs in cases where only few farms are represented as very high or very low KPIs on individual farms may heavily impact the average KPIs. Consequently, KPIs are determined as medians when fewer than 150 farms are represented and as weighted average according to herd size when more than 150 farms are represented in the data material. As the number of farms varies from previous years, some KPIs are based on a different method than previously. Appendix provides an outline of KPIs comparable with previous editions of the analysis. Average KPIs for the top 5 farms are calculated as simple average with no weighting to herd size or production scope.

Results and discussion

The National Average Productivity Index 2022 [1] comprised data from 760 sow farms, 483 weaner farms, and 1,116 finisher farms, and of these 278 sow farms (37%), 134 weaner farms (28%) and 84 finisher farms (8%) were confirmed DanBred farms. This is largely identical to the 2021 analysis.

The data material thus comprised very few weaner farms and finisher farms and a fairly low number of sow farms compared with the estimated DanBred market share. This is attributed partly to the fact that the data material included anonymized farms and partly to the fact that it is far more difficult to establish the genetics used on an annual basis on weaner farms and finisher farms.

Productivity - sows

Table 1 shows the productivity of sow farms as weighted average for all sow farms as well as the top 5 of selected sow farms. Results show that the top 5 farms weaned 7.4 more pigs per sow/year than the average. KPI for pigs weaned/sow/year was 0.2 higher than in 2021 [2] when looking at the weighted average, which resulted in an increase of 0.5 pigs weaned/sow/year compared with 34.1 as reported in the National Productivity Index [1]. On the top 5 sow farms, sows weaned averagely 0.8 more pigs/sow in 2022 compared with 2021. This progress is primarily attributed to improved litter results in terms of more liveborn and a drop in piglet mortality. When the top 5 farms are compared with the weighted average, it is noteworthy that the overall piglet mortality is 5.1 percentage points lower on the top 5 farms. Note that 321 sow farms were included in the 2021 analysis, and only 278 were included in 2022, which is still more than in 2019 and 2018.

Table 1. Production level, all DanBred sow farms included in the data material and average of 5 sow farms selected according to pigs weaned/sow/year.

	All farms (weighted average)	Top 5 Average
Farms included	278	5
Farms with feed records	242	5
KPI		
Sows/year, head ¹	889	932
Feed units, sow/year ²	1,510	1,604
Litter results		
First parity litters, %	23.2	21.3
Liveborn/litter, head	18.2	19.7
Stillborn/litter, head	1.9	2.3
Weaned/litter, head	15.4	18.0
Lactation period, days	31	29
Weaning weight, kg	6.26	6.1
Pre-weaning mortality, %	15.4	8.6
Total piglet mortality, %	23.2	18.1
Reproduction		
Non-productive days/litter	14.7	9.7
Weaning to first service, days	6.0	5.4
Return rate, %	5.3	3.9
Farrowing rate, %	87.4	91.2
Pigs weaned/sow/year, head	34.6	42.0
Litters/sow/year	2.24	2.33

¹ Simple average.

² Only including farms in the interval 1,000-2,000 feed units.

Productivity – weaned pigs

Daily gain, feed conversion and mortality for DanBred weaner farms were slightly lower than those of the entire Danish pig industry [1]. Due to the low number of farms included, definite conclusions on small increases/drops in KPI are not possible. Daily gain for selected the top 5 farms was 97 g higher than the average of all farms (table 2).

Table 2. Production level, all DanBred weaner farms included in the data material and average of top 5 farms selected according to daily gain.

	All farms Medians	Top 5 Average
Farms included (total in data material)	134	5
Farms with feed records	118	5
KPI		
Pigs produced/year, head	23,431	33,807
Daily gain, g	451	555
Reference-daily gain (7-30 kg), g ¹	460	539
Feed conversion ratio/kg gain, feed units	1.79	1.69
Reference-FCR (7-30 kg), feed units/kg gain ¹	1.78	1.67
Mortality, %	4.0	4.0
Other data		
Start weight, kg	6.0	6.9
Weight/sold pig, kg	31.0	32.8

¹ Reference-FCR and reference-daily gain adjust the averages shown to standard weight interval 7-30 kg, thereby allowing for comparison between years. For more information, see previous editions [4].

Productivity – finishers

Analysis of productivity on finisher farms revealed a daily gain of 1,034 g determined as median of all farms, which is an increase of 13 g compared with 2021 [2]. Overall, productivity on DanBred finisher farms was level with the National Average Productivity Index [1] for daily gain, feed intake and reference-feed conversion. Productivity among selected top 5 farms (with the highest daily gain) averaged 1,136 g daily gain and reference-FCR was 2.48 feed units per kg gain, which is level with or even slightly better than top 5 in 2020 [2]. Note that KPI estimates for previous years are subject to some uncertainty due to the low number of farms included.

Table 3. Production level, all DanBred finisher farms included in the data material and average of top 5 farms selected according to daily gain.

	All farms Medians	Top 5 Average
Farms included	84	5
Farms with feed records	66	5
KPI		
Pigs produced/year, head	6,891	10,819
Daily gain, g	1,038	1,136
Reference-daily gain (30-115 kg), g ¹	1,024	1,128
Daily feed intake/pig, feed units	2.75	2.84
Feed conversion ratio/kg gain, feed units	2.69	2.51
Reference-FCR (30-115 kg), feed units/kg gain ¹	2.66	2.48
Other data		
Start weight, kg	31.3	33.1
Carcass weight, kg (average)	87.9	88.5
Gain/produced pig, kg	84.,3	82.9
Lean meat % (average)	62.4	62.6
Rejected, %	0.2	0.3
Mortality, %	3.4	3.3

¹ Reference-FCR and reference-daily gain adjust the averages shown to standard weight interval 30-115 kg, thereby allowing for comparison between years. For more information, see previous editions [4].

Conclusion

This report presented the estimates of productivity on sow, weaner and finisher farms identified as DanBred farms.

In the weighted average, DanBred sow farms produced 34.6 pigs/sow/year which is 0.5 more than 34.1 as found in the National Average Productivity Index 2022 [1].

Productivity on weaner farms and finisher farms using DanBred genetics is roughly identical to the level presented in the National Average Productivity Index 2022 [1]. However, KPIs are subject to some uncertainty due to the low number of farms confirmed as DanBred farms in the analysis.

The average top 5 sow farms weaned 42.0 pigs/sow/year, the top 5 weaner farms achieved an average reference-daily gain of 539 g and finisher farms achieved an average reference-daily gain of 1,128 g. Reference-FCR for the top 5 DanBred finisher farms was 2.48 feed units per kg in the 30-115 kg period vs 2.66 feed units/kg for the average farm – a difference of 0.18 feed units/kg gain.

References

- [1] Vinther J. (2023): Landsgennemsnit for produktivitet i produktionen af grise i 2022. Notat no. 2315, SEGES Innovation.
- [2] Hansen, C. (2022): Brancheanalyse for produktivitet i udsnit af DanBred-besætninger 2021. Notat no. 2207, SEGES Svineproduktion.
- [3] Hansen, C. (2021): Brancheanalyse for produktivitet i udsnit af DanBred-besætninger 2019. Notat no. 2105, SEGES Svineproduktion.
- [4] Sloth, N. M. & Bertelsen, E. (2007): Rapport over P-rapporternes resultater oktober 2007. Notat no. 0745, Dansk Svineproduktion.

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Appendix

Appendix presents KPIs (all medians) for the period 2018-2022 calculated according to the method thereby allowing for inter-year comparison. Tables 4, 5 and 6 show the development for sows, weaned pigs and finishers, respectively.

Table 4. Production level, DanBred sow farms, 2018-2022 [2]. All KPIs calculated as medians.

	2022	2021	2020	2019	2018
Farms included	278	321	304	221	152
Farms with feed records	242	286	277	203	142
KPI					
Sows/year, head ¹	731	718	720	762	747
Feed units/sow/year ²	1,511	1,516	1,527	1,509	1,524
Litter results					
First parity litters, %	22.4	22.7	21.9	21.6	22.6
Liveborn/litter, head	18.3	18.0	18.0	17.7	17.4
Stillborn/litter, head	1.9	1.9	1.9	2.0	1.8
Weaned/litter, head	15.4	15.3	15.2	15.0	15.0
Lactation period, days	31	31	31	30	31
Weaning weight, kg	6.1	6.1	6.2	6.2	6.4
Pre-weaning mortality, %	15.5	15.6	15.3	14.9	14.1
Total piglet mortality, %	23.5	23.5	23.2	23.5	22.4
Reproduction					
Non-productive days/litter	14.4	14.2	13.4	13.0	12.8
Weaning to first service, days	5.8	5.8	5.7	5.7	5.6
Return rate, %	5.1	5.2	5.4	5.0	4.8
Farrowing rate, %	87.8	87.9	87.8	89.1	89.2
Weaned/sow/year, head	34.3	34.3	34.2	33.9	33.8
Litters/sow/year	2.23	2.24	2.25	2.27	2.27

¹ Simple average.

² Only including farms in the interval 1,000-2,000 feed units.

Table 5. Production level, DanBred weaner farms, 2018-2022 [2]. All KPIs calculated as medians.

	2022	2021	2020	2019	2018
Farms included (total in data material)	134	163	160	112	88
Farms with feed records	118	153	144	97	82
KPI					
Pigs produced/year, head	23,432	20,402	19,567	19,529	18,807
Daily gain, g	451	458	454	449	451
Reference-daily gain (7-30 kg), g ¹	460	469	460	460	460
Feed conversion ratio/kg gain, feed units	1.79	1.80	1.80	1.83	1.87
Reference-FCR (7-30 kg), feed units/kg gain ¹	1.78	1.80	1.79	1.84	1.86
Mortality, %	4.0	3.6	3.5	3.2	3.1
Other data					
Start weight, kg	6.0	6.0	6.2	6.3	6.4
Weight/sold pig, kg	31.0	31.4	30.8	30.7	30.9

¹ Reference-FCR and reference-daily gain adjust the averages shown to standard weight interval 7-30 kg, thereby allowing for comparison between years. For more information, see previous editions [4].

Table 6. Production level, DanBred finisher farms, 2018-2022 [2]. All KPIs calculated as medians.

	2022	2021	2020	2019	2018
Farms included	84	73	62	61	35
Farms with feed records	66	62	48	53	28
KPI					
Pig produced/year, head	6,891	7,994	6,461	9,091	8,292
Daily gain, g	1,038	1,021	1,007	974	945
Reference-daily gain (30-115 kg), g ¹	1,024	1,012	1,012	966	934
Daily feed intake/pig, feed units	2.75	2.77	2.75	2.66	2.62
Feed conversion ratio/kg gain, feed units	2.69	2.71	2.67	2.72	2.73
Reference-FCR (30-115 kg), feed units/kg gain ¹	2.66	2.68	2.63	2.71	2.73
Other data					
Start weight, kg	31.3	31.8	32.6	31.8	31.0
Carcass weight, kg (average)	87.9	89.7	90.1	86.9	85.6
Gain/pig produced, kg	84.3	86.4	87.0	82.2	79.3
Lean meat % (average)	62.4	62.0	61.6	61.4	61.1
Rejected, %	0.2	0.2	0.1	0.1	0.2
Mortality, %	3.4	3.8	3.6	3.7	3.4

¹ Reference-FCR and reference-daily gain adjust the averages shown to standard weight interval 30-115 kg, thereby allowing for comparison between years. For more information, see previous editions [4].