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NATIONAL AVERAGE PRODUCTIVITY OF DANISH PIG FARMS 2022

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Main conclusion

Sow productivity improved by 0.1 piglet/sow/year to 34.1 piglets/sow/year, which is similar to the progress seen the past six years despite unchanged reproduction KPIs and a minor improvement in litter results. Total piglet mortality dropped by 0.1 percentage points to 23.3%. Sow mortality increased to 14.5%, which is a 0.5 percentage point increase. Productivity for weaned pigs increased by approx. 4% as has been the case in the last four years primarily attributed to an improved FCR of 1.77 feed units/kg gain. Mortality rates increased by 0.4 percentage points to 4.3%. Productivity for finishers increased approx. 5% at pen level and remained unchanged at pig level, a difference that is attributed to a 3.5 kg drop in gain in the finisher period. The increase at pen level is caused by a 10 g increase in daily gain and a 0.5 percentage points increase in lean meat.

Abstract

Analyses revealed improvement in productivity for weaned pigs, a marginal improvement in sow productivity and a small improvement in finisher production. Mortality rates increased for sows and weaned pigs. Total piglet mortality was 23.3%, which is a 0.1 percentage point drop compared with 2021. Sows weaned averagely 34.1 pigs/sow/year.

Production of weaned pigs averaged 27,105 pigs per farm per year. Reference-feed conversion ratio (7-30 kg) was 1.77 feed units per kg gain, which is an improvement of 0.04 feed units/kg gain compared with 2021. Reference-daily gain was 465 g, which is unchanged compared with 2021. Mortality was 4.3%, which is an increase of 0.4 percentage points compared with 2021. Production value per pig and production value per pig place reached an all-time high in 2022 at index 122 compared with 2013.

Production of finishers averaged 8,595 pigs per farm per year. Reference-daily gain (30-115 kg) was 1,039 g, which is an 11 g increase compared with 2021. Reference-feed conversion ratio was 2.65 feed units per kg, which is 0.01 lower than in 2021. Dead and discarded at slaughter constituted 3.5% of all pigs produced, which is a 0.1 pig drop compared with 2021. Production value per pig and per pig place in 2022 was 183 and 190, respectively, compared with 2013.

The 2022 data material included 760 sow farms with approx. 626,500 sows/year; 483 weaner farms with a total production of roughly 13.1 million weaned pigs; and 1,116 finisher farms producing approx. 9.6 million finishers. The 2022 data material thereby includes roughly 10% more finisher farms and finishers than in 2021. The number of weaner farms and sow farms included approx. 100 fewer farms per category, which is a 10% reduction in pigs compared with previous years.

The 2022 national average is based on productivity data from Danish farms using management software from Agrovision or Cloudfarms ApS. Data was collected from farms where productivity reports were submitted directly to Agrovision or Cloudfarms. Productivity data was also obtained from Danish Crown Data. The entire data material in this publication is based on the 2022 data and on data used in previous years' editions of the National Average Productivity index [1].

Background

The national average for productivity provides a summary of productivity in Danish pig production. Published annually, the index is based on the most recent data from Danish pig farms and comprises several years of data, thereby making it the most comprehensive analysis of productivity on Danish pig farms. It forms the basis of national figures for productivity and KPIs for sow farms, weaner farms and finisher farms.

Materials and methods

The national average productivity is based on 2022 data from Danish pig farms and on data from previous years' editions of the National Average Productivity index published by SEGES [1].

The 2022 analyses are based on data from farm productivity reports submitted directly to Agrovision, Cloudfarms ApS and Danish Crown Data. Since 2018, data has been collected from Agrovision and Cloudfarms using the same method.

For the first time, the data material also included finisher KPIs – identical to data delivered from Agrovision and Cloudfarm - from Danish Crown Data powered by IQinABox that generated data extract and a conventional productivity report. Many farms joined Danish Crown Data in the middle of the period, and as a result some farms switched management systems at this point. Consequently, a farm may be represented twice if the productivity data meets all inclusion criteria, but has two different IDs. However, it is estimated that the period with potential double recordings is relatively short and this is therefore not expected to have affected the outcome except for a slight overestimation of the number of finisher farms and the number of pigs included in the analyses.

Pre-2018, the regional advisory centres picked which farms to include and handled collection and validation of the data. Consequently, the data material and the population of farms represented may differ from previous years, and this may in some cases affect the KPIs shown.

The periods included that may cover different periods between farms were selected and aggregated using an algorithm for automatic selection and partly automatic data validation.

Automated selected and data validation

The data material consists of productivity reports submitted by the owner, user or advisor. Data was submitted automatically via Agrovision or Cloudfarms and via Danish Crown Data extracts.

Data was validated and documented by the data supplier prior to submission to SEGES Innovation. The automatic submission also included information for validation of the individual KPI, which included

sums to validate that data was correctly submitted. In addition, expected correlations between data relating to daily gain, feeding days, feed conversion ratio etc. were validated, a process also known as 'cross-validation of KPI'. Data was checked for extreme values and excluded if the values were outside the minimum and maximum limits for KPI (table 1). Extreme values may occur if, for instance, the owner has switched to another management programme or if some of the KPIs in the productivity reports are not being used by the pig producer and therefore not correctly submitted. Farms were divided into sow farms, weaner farms and finisher farms, and farms that did not fit into any of these categories were excluded (for more information, see section on minimum and maximum limits for KPI in table 1).

Finisher producers are able to record and submit data to SEGES Innovation via management programmes that covers multiple herd numbers in one entry, provided it is clear that data originates from multiple sites. Farm structure was analysed manually for finisher farms > 20,000 finishers/year. If information in the central herd register and/or the data structure confirmed that data concerned multiple herd numbers, data from each site was distributed among the correct number of sites. It is also possible to submit pooled records for multiple farms, and these recordings were eliminated if the manual analysis confirmed that a report contained pooled records from multiple sites/farms.

As a precaution against miscalculations of the KPI 'non-productive days' between farms using Agrovision or Cloudfarms, respectively, and to ensure that potential adjustments were implemented for all farms, productivity reports used in the 2022 national average productivity index were submitted after April 20, 2023, to ensure that all non-productive days for inseminations made in 2022 were determined correctly.

Farm productivity reports were selected on the basis of pig farmers' own calculations. It is possible to generate productivity reports for the same periods/year with different time intervals, ie. a production year may be presented in monthly reports, quarterly reports and an annual report.

Farm productivity reports used in the national average productivity index were selected according to the criteria stated below in hierarchical order (applies to all farm types):

1) Identical start dates +/- 5 days, the most recent productivity report was used.
2) Periods starting at calendar quarters with periods of 75-120 days (approx. January 1, April 1, July 1 and October 1), followed by selection according to length (regardless of starting point):
    a. 75-120 days
    b. 20-40 days
    c. 40-75 days
    d. 120-220 days
    e. 220-390 days

Periods of < 20 days and > 390 were not included. Farm productivity reports with date overlaps were excluded.

Cross-validation of data submitted automatically via Agrovision, Cloudfarms and Danish Crown Data

For each productivity report, data was checked for correlations between KPIs and it was thereby validated that the data supplier had not altered the equations behind the KPIs.

<u>Sows</u>

- Weaned pigs/sow/year must correspond with average number of litters/sow and pigs weaned/litter.

- There must be a correlation between lactation period (days), non-productive days, gestation period (days) and litters/sow/year.

Weaned pigs
- There must be a correlation between start weight, final weight, total gain and pigs produced.
- Calculation of daily gain must correspond with total gain and number of feeding days.

Finishers
- For calculation of carcass weight/liveweight a conversion factor of 1.31 must be applied (slaughter percentage 76.3), so that carcass weight is determined using the same equation for all farms (slaughter weight= 0.763 × liveweight).
- There must be a correlation between weight at transfer to the finisher unit, carcass weight, total gain and number of finished pigs.
- Calculation of daily gain must correspond with total gain and number of feeding days.

Minimum and maximum limits for KPI

The KPIs calculated by the farm owner, user or advisor are assumed to be correct. However, there are situations where the KPIs presented seem inaccurate. For instance, where data was converted between management programmes or where certain components of the programme were not in use. In such cases, it is necessary to apply exclusion criteria for farms and/or individual KPIs.

Table 1 shows the minimum and maximum limits used in this report. With the exception of anomalies in feed records, sow mortality and weaning weight, all data from a farm was excluded from the data material if values were outside the minimum and maximum limits presented in table 1. Farms were excluded if their status (status count of pigs) diverged by more than 5%, regardless of pig category.

Furthermore, all records from a farm were excluded from the data material if individual KPIs were missing.

Calculation of KPI averages

KPIs (except sows/year and pigs produced/farm) were determined as an average value weighted according to herd size as this is the best expression of the average pig.

Total piglet mortality

Total piglet mortality was calculated at farm level as the difference between total born piglets and pigs weaned within the specific period. Subsequently, the national average was determined on the basis of a weighted average across all farms.

Table 1. Exclusion criteria (minimum and maximum limits) for farm average. Farms outside the limits were excluded from the data analysis.

	All farm KPIs are excluded	Only the specific KPI is excluded
General		
Minimum number of days in calendar year	<150	
Sows		
Total number of feed units per sow/year		<1,000; >2,000
Percentage of dead and killed sows[1]		>40%
Weaned pigs		
Start weight, kg	<4.0; >15.5	
Final weight, kg	<20; >40	
Daily gain, g	>900	
Status difference (%)	<-5; >5	
Feed units per kg gain[2]		1.4 – 2.5
Finishers		
Start weight, kg	<20; >40	
Carcass weight, kg	<60	
Feed units per kg gain[2]		2.2 – 3.9
Percentage of dead and killed (%)	<25	
Status difference (%)	<-5; >5	
Slaughter percentage	<>76.3	
Average daily gain, g	<400; >1,600	

[1] On some farms, a slaughtered sow is recorded as dead/killed; this leads to an unrealistically high percentage of dead sows on some farms, which is why this limit was introduced.

[2] If this is excluded, it is not possible to determine the reference-feed conversion ratio or the production value for the farm in question.

Production value

A “technical production value” (PV) was determined on the basis of data from all finisher and weaner farms (table 2). PV was based on daily gain, feed conversion ratio (FCR) and mortality, and for finishers also lean meat percentage. All prices were standardized (average price September 2017 - September 2022) to allow for comparison between farms (table 3).

Table 2. Equations used for calculating the production value of weaned pigs and finishers.

Equation
PV per pig (identical for weaned pigs and finishers) = Sales price – purchase price – feed costs – various costs
PV per pig place/year (identical for weaned pigs and finishers) = PV per pig × (365 days/feeding days per pig) × utilization of housing capacity
Sales price (finishers) = (slaughter weight * Pig price finishers) + (carcass weight * value of lean meat % per kg)
Sales price (weaned pigs) = price per 30 kg pig + (final weight * correction for excess weight or under weight)
Purchase price (finishers) = (price per 30 kg pig + (start weight - 30) * correction for excess weight or under weight) / (1- % dead and discarded).
Purchase price (weaned pigs) = (price per 7 kg pig + (start weight - 7) * correction for excess weight or under weight) / (1-% dead and discarded / 2)
Feed costs (finishers) = ((carcass weight * 1.31) – start weight) * feed units per kg gain * price of finisher feed) / (1-% dead and discarded / 2)
Feed costs (weaned pigs) = ((final weight – start weight) * feed units per kg gain * price of weaner feed diet 2 + (price weaner diet 2 - prices weaner diet 1) * 6 feed units) / 1 – % dead and discarded / 2)
Feeding days (finishers) = ((carcass weight*1.31) – start weight) / (g daily gain /1000) / (1 – % dead and discarded / 2)
Feeding days (weaned pigs) = (final weight – start weight) / (g daily gain /1000) / (1 – % dead and discarded / 2)
Value of lean meat % per kg = (-0.8149 * (lean meat %)^2 + 111.58 * lean meat % - 3776.9) / 100 (source: [2])

Table 3. Price assumptions applied in the calculation of production value figures (PV).

Factor used for PV calculation	Price assumptions
Price of a 7 kg pig:	DKK 225 per pig, + DKK 11.15 per kg above 7 kg, - DKK 14.15 per kg below 7 kg
Price of a 30 kg pig:	DKK 395 per pig, + DKK 5.93 per kg above 30 kg, - DKK 5.94 per kg below 30 kg
Price of a finisher:	DKK 11.27 per kg, incl. bonus payment
Feed, finishers:	DKK 1.76 per feed unit (FUgp)
Feed weaned pigs, diet 1:	DKK 3.83 per feed unit (FUgp) (assuming this constitutes six feed units)
Feed, weaned pigs, diet 2:	DKK 2.06 per feed unit (FUgp)
Various costs:	DKK 13.63 per weaned pig and DKK 19.25 per finisher (excl. transport costs)
Utilization of housing capacity:	95%

In this report, the same prices were applied to the production value for all previous years, to be able to generate an index of the last ten years. As a result, both index and production value of the previous years were revised and therefore cannot be compared with previous editions of the report.

Results and discussion

The 2022 national average comprised more finisher farms and fewer sow farms and weaner farms than in 2021.

Tables 4, 5 and 6 show the ten-year average for sow farms, weaner farms and finisher farms, respectively. In tables 7, 8 and 9 farms are ranked according to efficiency: top 25%, middle 50% and bottom 25% for sow farms, weaner farms and finisher farms, respectively.

Productivity - sows

Table 4 shows the productivity average for sow farms. Weaned pigs/sow/year averaged 34.1 which is a 0.1 increase compared with 2021. It must be noted that though only two decimals are shown in the tables, calculation of each KPI included all decimals. Consequently, readers will not be able to accurately determine derived KPIs on the basis of KPIs provided in the tables.

The data material comprises 760 sow farms with an average of 824 sows/year, totalling 626,471 sows /year, which is approx. 100 farms fewer and a reduction of approx. 75,000 sows compared with 2021 which saw the largest number of sows/years represented in the national average productivity index so far.

Dead and killed sows in 2022 averaged 14.5%, which is a 0.5 percentage point increase compared with 2021. This increase was also seen in sow mortality reports based on data from DAKA and Statistics Denmark showing a sow mortality of 16.5% in 2022, which is an increase of 0.4 percentage points [3]. The DAKA sow mortality national records also include dead gilts, young females and finishers above 120 kg, ie. farms without sows also contribute to the statistics. In 2019, it was decided to exclude mortality rates above 40% from the national average productivity index as some farms erroneously apply the codes for dead/killed sows when shipping sows to slaughter.

Total born per litter increased from 19.8 to 19.9 caused by a slight increase in liveborn/litter of 0.1. Pre-weaning mortality increased by 0.1 percentage points to 15.3%. Stillborn/litter remained unchanged compared with 2019 resulting in a 0.1 percentage point decrease in overall piglet mortality from 23.4% in 2021 to 23.3% in 2022 (table 4).

Analyses revealed only marginal variations in reproduction results compared with 2021 as the farrowing rate remained at 87.3%. Days from weaning to first service increased by 0.1 to 6.1. Non-productive days remained at 15.0 days per litter. Return rates dropped by 0.3 percentage points landing at 5.2%.

Table 4. Weighted (according to herd size) average production level per farm, sows.

Period	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Farms	760	862	821	815	710	535	570	459	537	604
Farms with feed records	620	703	678	669	652	524	543	431	480	577
KPI										
Sows/year, head [1]	824	813	802	812	769	791	767	742	707	680
Feed units, sow/year	1,514	1,514	1,516	1,501	1,500	1,465	1,464	1,469	1,502	1,488
Litter results										
First parity litters, %	24.1	24.5	23.7	23.6	23.9	22.7	22.8	23.8	24.3	23.9
Liveborn/litter, head	18.0	17.9	17.7	17.5	17.3	17.0	16.4	16.0	15.7	15.4
Stillborn/litter, head	1.9	1.9	1.9	1.9	1.8	1.7	1.6	1.6	1.7	1.7
Weaned/litter, head	15.3	15.1	15.1	14.9	14.9	14.7	14.2	13.9	13.6	13.4
Lactation period, days	31	31	31	31	31	30	30	30	30	30
Weaning weight, kg	6.3	6.4	6.4	6.5	6.6	6.4	6.5	6.6	6.8	6.8
Pre-weaning mortality, %	15.3	15.2	14.9	14.8	14.2	13.4	13.0	13.2	13.3	13.3
Total piglet mortality, %	23.3	23.4	23.1	23.2	22.0	21.4	20.9	21.2	21.6	21.8
Reproduction										
Non-productive days/litter	15.0	15.0	14.4	13.8	13.9	12.1	12.5	12.7	13.3	13.7
Weaning to first service, days	6.1	6.0	5.9	5.9	5.8	5.6	5.7	5.7	5.7	5.8
Return rate, %	5.2	5.5	5.5	5.3	5.3	4.5	4.8	4.9	5.6	6.1
Farrowing rate	87.3	87.3	87.6	88.1	88.3	89.6	89.0	88.5	87.6	87.0
Weaned pigs/sow/year, head	34.1	34.0	33.9	33.6	33.6	33.6	32.5	31.7	30.8	30.3
Litters/sow/year	2.23	2.24	2.25	2.26	2.26	2.29	2.28	2.28	2.27	2.27

[1] KPI 'sows/year, head' is calculated as simple average.

Overall, results reveal stable progress in the last ten years with the exception of a few short periods of stagnation. In spite of the unchanged KPIs for reproduction and only slight progress in litter results, figures reveal the same stable progress in sow productivity as seen in the last six years.

Productivity – weaned pigs

Average production increased to 27,105 a year, which exceeds the expected structural development from 2021 to 2022 and is attributed to, among other factors, the drop in farms included in the national average. Reference-daily gain increased by 1 g to 465 g/day and reference-FCR per kg gain dropped by 0.04 feed units per kg gain to 1.77 feed units/kg gain. Mortality increased by 0.4 percentage points to 4.3%, which is the highest level in the last ten years.

In 2022, the production value per pig and per pig place reached all-time highs corresponding to index 122 compared with 2013 (table 5).

Table 5. Weighted (according to herd size) average production level per farm, weaned pigs.

Period	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Farms	483	582	550	586	568	532	541	412	325	574
Farms with feed records	421	528	499	511	505	508	522	404	313	564
KPI										
Pigs produced / year, head[1]	27,105	24,896	23,789	22,649	22,298	23,569	23,367	22,077	18,232	17,556
Daily gain, g	458	463	461	448	456	446	441	439	440	446
Reference-ADG (7-30 kg), g [2]	465	464	461	451	460	451	446	442	440	443
Feed conversion ratio (FCR) per kg gain, FUgp	1.77	1.81	1.83	1.84	1.84	1.87	1.87	1.87	1.92	1.90
Reference-FCR (7-30 kg), FUgp per kg gain [2]	1.77	1.81	1.82	1.84	1.84	1.87	1.87	1.87	1.92	1.89
Mortality, %	4.3	3.9	3.6	3.6	3.2	3.1	3.2	3.1	2.8	2.8
Other KPI										
Start weight, kg	6.4	6.6	6.8	6.8	6.6	6.6	6.5	6.7	6.8	6.9
Weight per sold pig, kg	30.6	31.0	30.9	30.2	30.5	30.3	30.6	30.4	30.6	30.8
PV/pig, DKK [3]	63	60	57	55	56	56	56	55	51	51
Index (PV/pig) [3]	122	117	112	108	109	109	109	108	100	100
PV/pig place/year, DKK [3]	402	387	372	360	364	361	351	349	326	328
Index (PV/pig place/year) [3]	123	118	114	110	111	110	107	106	100	100

[1] KPI 'pigs produced/year, head' is calculated as simple average.

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

[3] Production value figures in this table are based on average production results. Identical price assumptions used for all years (see section on materials and methods).

Productivity – finishers

Table 6 reveals an average herd size in 2022 of 8,595 finished pigs/year - which is lower compared with previous years - most likely attributed to structural development. The increase seen from 2020 to 2021 was most likely caused by the structural development, whereas the subsequent drop from 2021 to 2022 may be attributed to changes in the data material as the number of farms represented was never higher and includes an annual production of 9.6 million finished pigs divided among 1,116 farms. In 2020, a new step was implemented where data from large farms was manually reviewed and subsequently split into the correct sites. This was done in cases where it was acknowledged that the data in fact represented productivity reports from more than one herd.

Feed intake dropped by 0.03 feed units/day and reference-FCR improved by 0.01 feed unit per kg gain to 2.65 feed units/kg gain. Reference-daily gain increased by 11 g to 1,039 g/day. Carcass weight dropped by 3 kg to 87.6 kg and total gain in the finisher period dropped by 3.5 kg liveweight. Lean meat percentage increased by 0.5 percentage points to 62.5%, which is the highest level seen in ten years. Mortality averaged 3.5% which is a 0.1 percentage point decrease. Production value per pig and per pig place increased to index 183 and 190, respectively, compared with 2013 (table 6).

Table 6. Weighted (according to herd size) average production level per farm, finishers.

Period	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Farms	1,116	985	859	802	819	628	714	494	548	650
Farms with feed records	879	870	746	684	702	603	693	480	535	633
KPI										
Pigs produced/year head, [1]	8,595	8,858	8,330	8,790	8,528	7,372	7,792	8,008	6,863	6,785
Daily gain, g	1,040	1,032	1,030	991	975	972	953	944	932	916
Reference-ADG (30-115 kg), g [1]	1,039	1,028	1,026	990	972	969	950	941	931	913
Daily feed intake/pig, feed units	2.76	2.79	2.77	2.70	2.66	2.68	2.66	2.63	2.62	2.57
FCR/kg gain, feed units	2.65	2.71	2.70	2.73	2.73	2.77	2.80	2.79	2.81	2.82
Reference-FCR (30-115 kg), feed units/kg gain [2]	2.65	2.66	2.65	2.73	2.74	2.77	2.82	2.82	2.84	2.86
Other information										
Start weight, kg	31.0	31.6	31.6	30.9	31.2	31.2	31.4	31.4	31.0	31.4
Carcass weight, kg (avg.)	87.6	90.6	90.6	87.6	86.2	86.9	84.9	84.1	84.3	82.6
Gain/produced pig, kg	83.7	87.2	87.1	83.8	81.8	82.6	79.8	78.8	79.4	76.8
Lean meat % (avg)	62.5	62.0	61.6	61.4	61.1	60.7	60.7	60.5	60.3	60.3
Dead and discarded, %	3.5	3.6	3.4	3.5	3.3	2.9	3.3	3.6	3.4	3.3
PV/pig, DKK [3]	167	168	166	145	129	125	113	105	100	91
Index (PV/pig) [3]	183	184	182	159	142	137	123	115	109	100
PV/place unit/year, DKK [3]	708	677	671	584	525	503	456	430	398	371
Index (PV/place unit/year) [3]	190	182	181	157	141	135	123	116	107	100

[1] KPI 'pigs produced/year, head' is calculated as simple average between farms.

[2] Reference-FCR and reference-ADG adjust the averages shown to standard weight interval 30-100 kg, thereby allowing for comparison between years. For more information, see previous publications [4].

[3] Production value figures in this table are based on average production results. Identical price assumptions used for all years (see section on materials and methods).

Ranked according to efficiency

Table 7 presents KPIs for sow farms ranked according to pigs weaned/sows/year. The top 25% weaned more than 35.8 pigs/sow/year; in comparison the bottom 25% weaned fewer than 32.0 pig/sow/year, which is a difference of 6.9 pigs weaned/sow /year when comparing with the median.

An average top 25-sow farm had 264 more sows/year than the bottom 25%. The top 25% had 20.7 total born piglets/litter and a total piglet mortality of 21.2% which is a 0.4 percentage point increase compared with 2021 [1]. The bottom 25% had 19.1 total born piglets per litter, which is a 0.2 improvement compared with 2021 and a total piglet mortality of 26.8%, which is a 0.2 percentage point increase compared with 2021.

Table 7. Production level national average 2022, sow farms, median values shown according to weaned pigs/sow/year.

	Top 25%	Middle 50%	Bottom 25%	All farms
Weaned pigs/sow/year, head	35.8	<=>	32.0	
Farms	190	380	190	760
Farms with feed records	171	325	124	620
KPI				
Sows/year, head	819	718	555	699
Feed units, sow/year	1,521	1,523	1,508	1,520
Litter results				
First parity litters, %	22.0	22.8	24.4	22.9
Liveborn/litter, head	18.8	18.0	17.1	18.0
Stillborn/litter, head	1.9	2.0	2.0	1.9
Weaned/litter, head	16.4	15.3	14.0	15.3
Lactation period, days	30	31	33	31
Weaning weight, kg	6.0	6.1	6.8	6.2
Pre-weaning mortality, %	12.9	15.4	18.1	15.3
Total piglet mortality, %	21.2	23.6	26.8	23.4
Reproduction				
Non-productive days/litter	11.5	14.8	18.8	14.5
Weaning to first service, days	5.5	5.9	6.2	5.9
Return rate, %	3.5	5.2	6.7	5.0
Farrowing rate, %	90.6	87.4	83.9	87.7
Weaned pigs/sow/year, head	37.1	33.9	30.2	33.9
Litters/sow/year	2.29	2.22	2.15	2.23

Table 8 shows KPIs for weaner farms according to production value per pig place/year. The top 25% of the farms achieved a production value/pig place higher than DKK 445/year; in comparison, the production value of the bottom 25% was lower than DKK 332/year. This is a difference of DKK 238/year when looking at the median. The gap in production value/pig place between the top 25% farms and the bottom 25% farms widened from 2021 to 2022. The introduction of a new price set in 2022 affected the weighting of the production parametres, and it is therefore not possible to compare the 2022 production value with that of previous years.

Note that for the top 25% farms, start weight was 1 kg lower than that of the bottom 25%. Even with a start weight of 6.3 kg, the top 25% farms had a daily gain that was 73 g higher and an FCR that was 0.29 FUgp/kg gain lower than the bottom 25%. Mortality was 2.7 percentage points lower on the top 25% farms compared with the bottom 25% corresponding to a 46% difference. However, compared

with 2021 mortality rates increased in all three categories by 0.2 (top 25%); 0.6 (middle 50%) and 1.3 (bottom 25%) percentage points.

Table 8. Production level national average 2022, weaned pigs, according to production value/pig place/year (only farms with reported feed consumption are included).

	Top 25%	Middle 50%	Bottom 25%	All farms
PV/pig place/year, DKK	445	<=>	332	
Farms	105	211	105	421
KPI				
Pigs produced/year, head	32,343	26,871	23,642	27,431
Daily gain, g	505	455	432	462
Reference-ADG (7-30 kg), g [1]	506	460	425	463
Feed conversion ratio/kg gain, feed units	1.66	1.79	1.95	1.80
Reference-FCR (7-30 kg), feed units/kg gain [1]	1.66	1.78	1.95	1.79
Mortality, %	3.1	4.2	5.8	4.3
Other information				
Start weight, kg	6.3	6.4	7.3	6.6
Weight/sold pig, kg	31.6	30.8	30.7	31.0
Production value (PV)				
PV/pig, DKK	74	64	44	61
Index (PV/pig) compared with 'median for all', %	121	105	72	100
PV/pig place/year, DKK	493	390	255	382
PV index compared with 'median for all', %	129	102	67	100

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

Table 9 shows KPIs for finisher farms according to production value per pig place/year. The top 25% generated a production value of more than DKK 796 per pig place/year. In comparison, the bottom 25% generated a production value of less than DKK 611 per pig place/year. Looking at the median, this is a gap of DKK 338/year. The introduction of a new price set in 2022 affected the weighting of the production parametres, and it is therefore not possible to compare the 2022 production value with that of previous years.

Table 9. Production level national average 2022, finisher farms, median values shown according to production value/pig place/year (including only farms with feed records).

	Top 25%	Middle 50%	Bottom 25%	All farms
PV/pig place/year, DKK	796	<=>	611	
Farms	219	441	219	879
KPI				
Pigs produced/year, head	9,068	9,214	7,485	8,747
Daily gain, g	1,107	1,046	967	1,042
Reference-ADG (30-115kg), g [1]	1,103	1,043	965	1,039
Daily feed intake/pig, feed units	2.80	2.77	2.73	2.77
Feed conversion ratio/kg gain, feed units	2.53	2.65	2.83	2.67
Reference-FCR (30-115 kg), feed units/kg gain [1]	2.51	2.64	2.84	2.66
Other information				
Start weight, kg	31.3	31.3	31.4	31.3
Carcass weight, kg (avg.)	88.5	87.7	86.5	87.6
Gain/produced pig, kg	84.7	83.6	81.9	83.4
Lean meat % (avg.)	62.5	62.4	62.2	62.4
Discarded, %	0.2	0.2	0.2	0.2
Dead, %	2.5	3.1	4.8	3.4
Production value (PV)				
PV/pig, DKK	195	167	119	162
Index (PV/pig) compared with 'average', %	120	103	73	100
PV/pig place/year, DKK	854	716	516	716
PV index compared with 'average', %	119	100	72	100

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

Conclusion

Sow productivity improved by 0.1 piglet/sow/year to 34.1 piglets/sow/year, which is similar to the progress seen the past six years despite unchanged reproduction KPIs and a minor improvement in litter results. Total piglet mortality dropped by 0.1 percentage points to 23.3%. Sow mortality increased to 14.5%, which is a 0.5 percentage point increase. Productivity for weaned pigs increased by approx. 4% as has been the case in the last four years primarily attributed to an improved FCR of 1.77 feed units/kg gain. Mortality rates increased by 0.4 percentage points to 4.3%. Productivity for finishers increased approx. 5% at pen level and remained unchanged at pig level, a difference that is attributed to a 3.5 kg drop in gain in the finisher period. The increase at pen level is caused by a 10 g increase in daily gain and a 0.5 percentage points increase in lean meat.

References

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