

# How production indicators are related to the profit on the farm. Danish experience.

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Euroopa Maaelu Arengu  
Põllumajandusfond:  
Euroopa investeringud  
maapiirkondadesse

## Short about me:

- 2007 Come to Denmark as practican
- 2007-2013 Work on 2 farms (600, 1000 sows)
- 2013-2014 Agriculture school
- 2015-2016 Farm manager
- 2016-2018 Agricultural academy
- 2018 Pig advisor, feed formulation at Nutrimin



nutrimin  
the right mix

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## Agenda:

- Potential in pig production
- How production indicators related to profit
- First steps to get better profit



# What is important for unlocking full potential of profit on the farm?

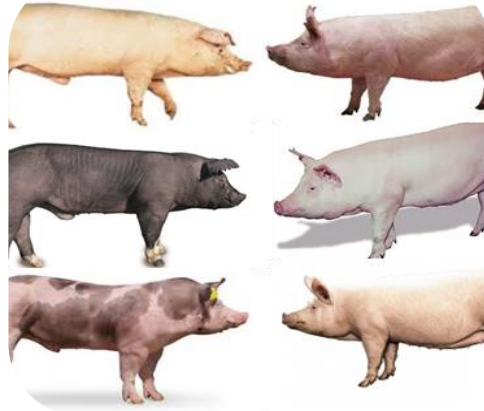
## Factors that have influence.



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### Animal

- Animal with good genetics potential
- Genetic goals, that are made to maximizing of profit

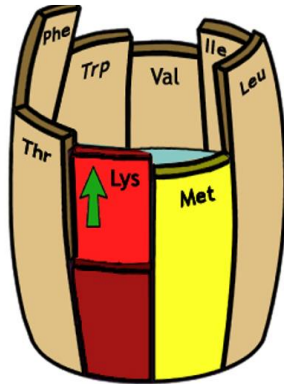


### Equipment

- Practical solutions that easy to work with
- Climate control
- Automatization
- Logistic on the farm

### Feed

- Quality of raw materials
- Stability of diets
- Feeding according to nutrient requirement
- Feed curves



### Health of animals

- Right treatment instruction
- Vaccination
- Health status of farms



### Management

- Right work instructions and workflow
- Know how
- Stabil and qualify personal
- Motivation of the personal
- Teamwork

# What do we have today?

## Production figures 2022



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	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
<b>KPI</b>				
Sows/year, head	819	718	555	699
Feed units, sow/year	1,521	1,523	1,508	1,520
<b>Litter results</b>				
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
<b>Reproduction</b>				
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

SEGES Innovation P/S

nutrimin  
the right mix

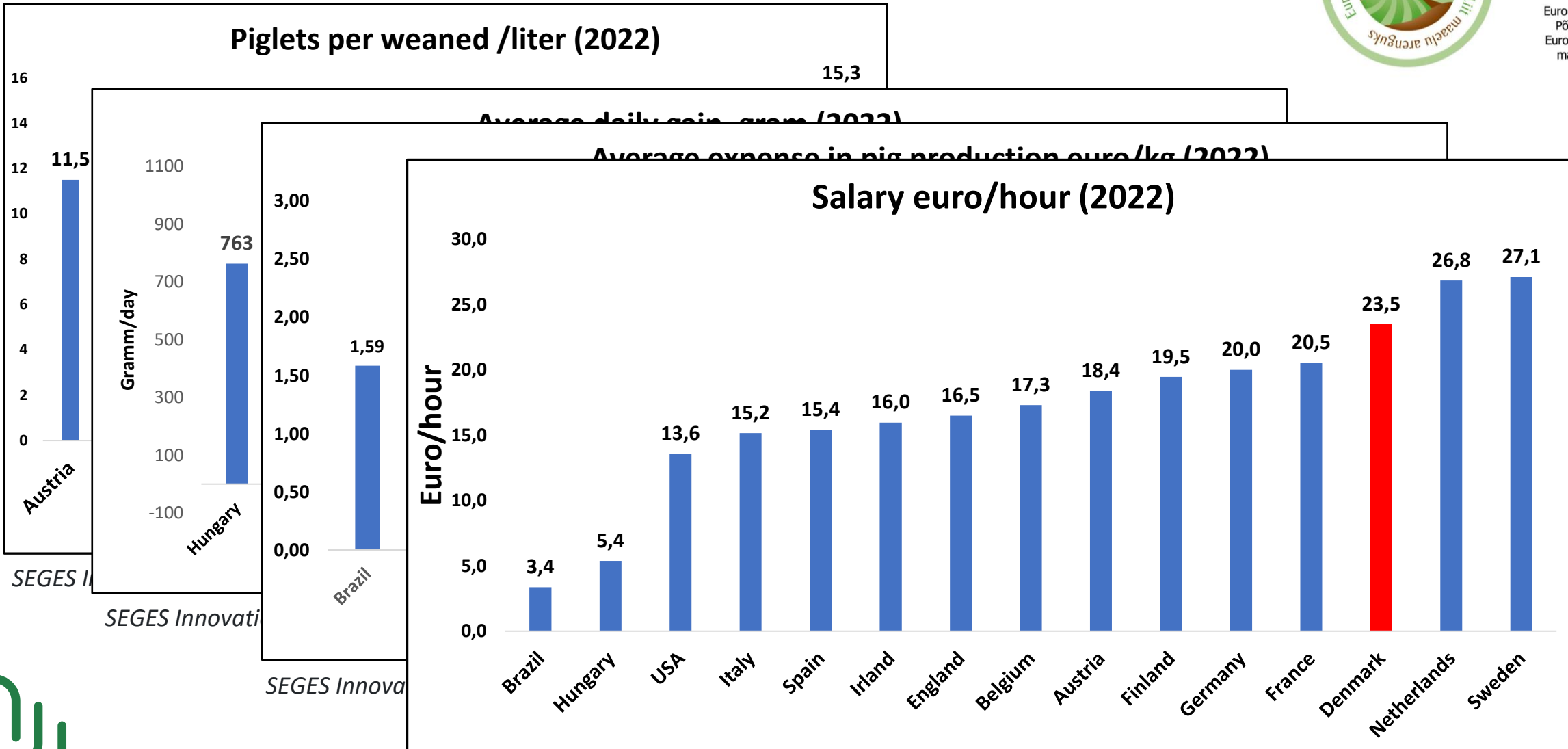


# Production results

## What is possible to achieve



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SEGES Innovation P/S, InterPig 2022



# How production indicators are related to the profit on the farm?

## Sows with weaning piglets



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SEGES Innovation P/S, Notat Nr. 2310 (2023)

Carcass price Danish Crown	EURO/kg	1,44	1,58	1,71	1,85	1,98
	+/- changing	Euro/Sow/Year	Euro/Sow/Year	Euro/Sow/Year	Euro/Sow/Year	Euro/Sow/Year
<b>Margin</b>	<b>notation</b>	<b>158</b>	<b>292</b>	<b>426</b>	<b>559</b>	<b>693</b>
Life born/litter	+/- piglet	52	59	67	74	82
Weaned pigs sow/year	+/- piglet	27	31	35	39	43
Mortality before weaning, %	+/- 5%	45	53	61	68	76
Weaning weight	+/- 1 kg	21	31	40	50	60
Empty days	+/- 1 days/liter	5	6	7	7	8
Farrowing rate, %	+/- 1 %	4	4	5	6	6
<b>Listing Independent values</b>						
Changing of feed price	+/- 1,5 eurocent/kg	21	21	21	21	21
Interest rate change, %	+/- 1 %	31	31	31	31	31



# How production indicators are related to the profit on the farm?

## Weaners pigs 6-30 kg



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SEGES Innovation P/S, Notat Nr. 2310 (2023)

Carcass price Danish Crown	Euro/kg	1,44	1,58	1,71	1,85	1,98
	+/- changing	EUR/pig	EUR/pig	EUR/pig	EUR/pig	EUR/pig
<b>Margin</b>	<b>notation</b>	3,62	5,64	7,65	9,66	11,68
Daily gain gr/day	464 +/- 10 gram	0,08	0,12	0,16	0,20	0,24
Out weight	+/- 1 kg	0,89	0,16	0,20	0,24	0,28
Mortality	+/- 1%	0,40	0,46	0,50	0,55	0,60
<b>Listing Independent values</b>						
Feed conversion kg/gain	+/- 0,1 kg	0,98	0,94	0,94	0,94	0,94
Changing of feed price	+/- 1,5 eurocent/kg	0,56	0,56	0,56	0,56	0,56
Interest rate change, %	+/- 1 %	0,27	0,27	0,27	0,27	0,27



# How production indicators related to the profit on the farm?

## Slaughter pigs 30-116 kg



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SEGES Innovation P/S, Notat Nr. 2310 (2023)

Carcass price Danish Crown	EURO/kg	1,44	1,58	1,71	1,85	1,98
	+/- changing	EUR/pig	EUR/pig	EUR/pig	EUR/pig	EUR/pig
<b>Margin</b>	<b>notation</b>	3,76	9,53	15,17	20,94	26,58
Daily gain gr/day	1032 +/- 100 gram	0,34	0,83	1,33	1,83	2,32
Out weight	+/- 1 kg	0,07	0,16	0,20	0,24	0,28
Mortality	+/- 1%	0,98	0,46	0,50	0,55	0,60
<b>Listing Independent values</b>						
Feed conversion kg/gain	+/- 0,1 kg	3,03	3,03	3,03	3,03	3,03
Changing of feed price	+/- 1,5 eurocent/kg	3,09	3,09	3,09	3,09	3,09
Interest rate change, %	+/- 1 %	0,91	0,91	0,91	0,91	0,91





# A little cost-benefit challenge for you



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Carcass price Danish Crown	EURO/kg	1,64	1,77	1,91	2,04	2,17
	+/- changing	Euro/Sow/Year	Euro/Sow/Year	Euro/Sow/Year	Euro/Sow/Year	Euro/Sow/Year
<b>Margin</b>	<b>notation</b>	<b>158</b>	<b>292</b>	<b>426</b>	<b>559</b>	<b>693</b>
Life born/litter	+/- piglet	52	59	67	74	82
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Mortality before weaning, %	+/- 5%	45	53	61	68	76
Weaning weight	+/- 1 kg	21	31	40	50	60
Empty days	+/- 1 days/liter	5	6	7	7	8
Farrowing rate, %	+/- 1 %	4	4	5	6	6

A pig farmer has a capacity of 500 sows and currently notation price is 2,17 Euro/kg. The average life born at the moment 14,5 and farrowing rate 85%.

Farmer has decided to change work instruction and implement a better routines in insemination and farrowing unit on the farm.

**How much can farmer increase income per year, if life born will increased to 15,5 and farrowing rate go up to 90%**



# A little cost-benefit challenge for you 😊



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Carcass price Danish Crown	EURO/kg	1,44	1,58	1,71	1,85	1,98
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Mortality	+/- 1%	0,98	0,46	0,50	0,55	0,60
<b>Listing Independent values</b>						
Feed conversion kg/gain	+/- 0,1 kg	3,03	3,03	3,03	3,03	3,03

A finisher pig farmer has a capacity of 2.500 slaughter/stable. The average weight pig he put to finishers is 31 kg and the sales weight is 118 kg.

Feed price is 0,35 euro/kg and FCR is 2,75 kg/kg gain weight.

How much can the farmer increase income per year if FCR is lowered by 0,1 to 2,65 kg/kg gain weight ?



# Cost benefit analysis.



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1. You have to have verified and valid figures and numbers from your production
2. You have to be able to calculate the consequences of changes in production (negative as well as positive)
3. You have to benchmark all the time to be better

## Productions results

<b>Sows</b>	
Live Born	19,1
Dead Born	1,5
Mortality until weaning %	12
Weaned per weaning	13,5
Weaned per liter	16,8
Lactation days	28
Farrowing percentage, %	93
Recurrence of insemination, %	8
<b>6-30 kg</b>	
Average daily gains, gr	496
Conversion per/kg of weight gain	1,6
Mortality, %	2,0
<b>30-115 kg</b>	
Average daily gains	1050
Conversion of kg/ kg gain	2,45
Percentage of meat in carcass	61,4

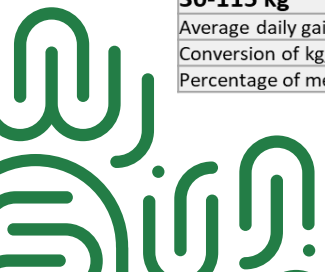
## Evaluations



## Challenge



## Goal



# Eksemplar on benchmarking in Denmark

181 Farm with less than 750 sows with selling of 30 kg



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Euro per sow/year	Strong competitiveness							Big potential for improvement		
	5%	10%	15%	33%	40%	50%	60%	67%	75%	90%
Pigs produced per year sow	35,70	34,90	33,70	33,10	32,40	32,00	31,10	30,60	29,90	28,10
Manufacturing price per piglet 30kg	44	46	48	49	49	51	52	53	54	58
Price per piglets sold	83	81	78	76	67	65	64	64	63	62
Committed capital	1.290	1.531	1.920	2.068	2.186	2.293	2.408	2.557	2.730	3.244
Total gross profit	2.541	2.486	2.358	2.305	2.262	2.192	2.139	2.099	2.046	1.922
Feed costs	663	700	749	777	794	813	838	860	877	927
Coverage contribution	1.526	1.463	1.349	1.275	1.243	1.210	1.168	1.130	1.074	953
Requirement for coverage contribution	503	531	582	604	619	630	652	670	702	772
Salary	196	228	254	264	276	287	297	303	317	354
Buildings	319	348	397	407	416	432	448	463	485	527
The year's result per sow/year	862	792	702	641	609	567	529	482	440	312



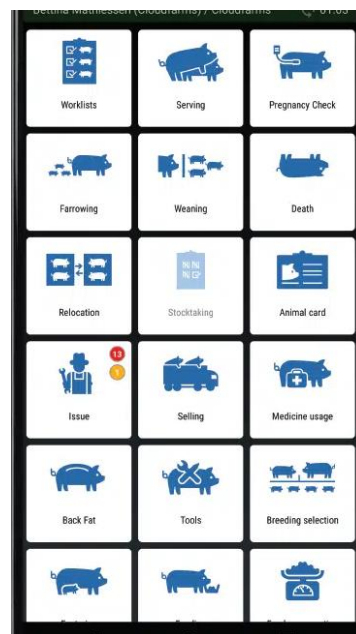
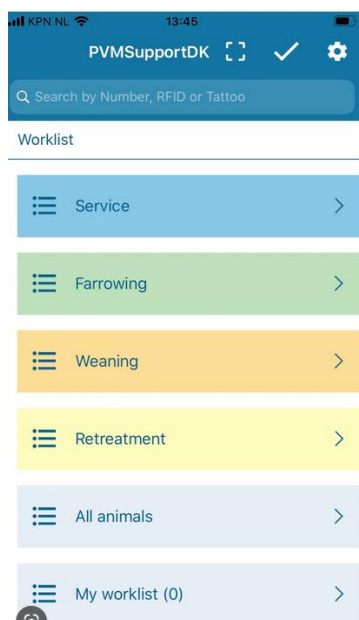
# What can I do tomorrow on my farm?

## Exempel on result registration



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Good idea to Introducing a program for easy and input data for production result on the farm



# Excel



# What can I do tomorrow on my farm?

## Exempel on result registration



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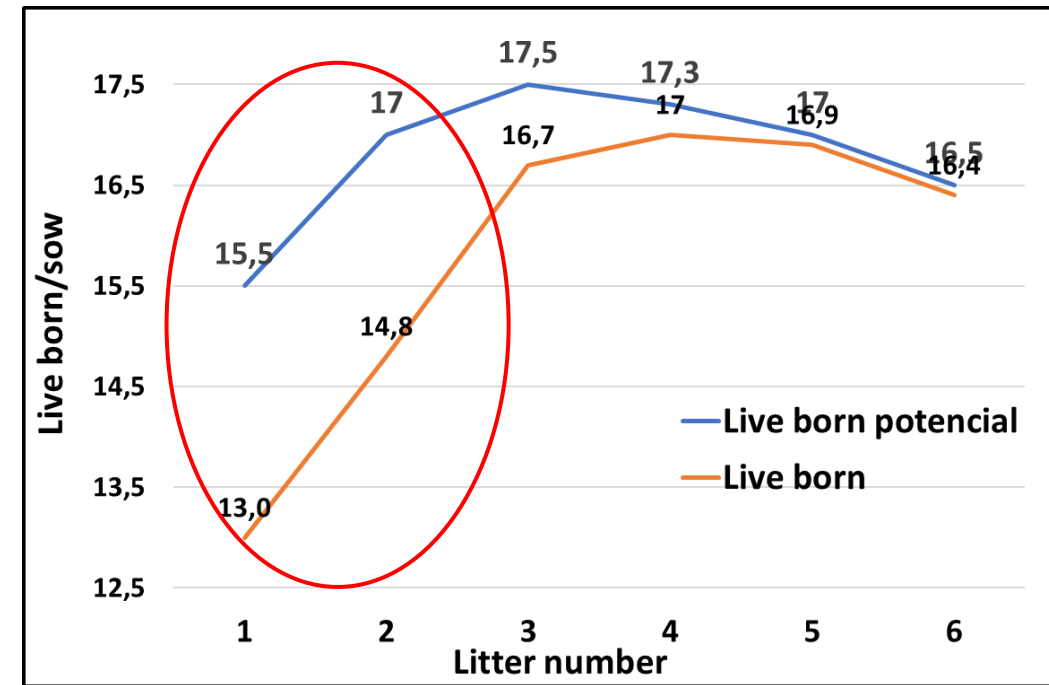
Number of sows 1100			1	2	3	4
<b>Served section result</b>		<b>Goal</b>				
Served sows, stk	Stk	52	53	51	50	54
Served gilts, stk	Stk	12	13	14	12	14
Repeat sows	Stk	3	3	3	4	3
Weaned sows, not served	Stk	2	3	1	2	2
Pregnant sow 4 weeks	Stk	49	48	47	47	47
Pregnancy rate,%	%	94	93	92	94	95
Slaughter sows	Stk	11	10	11	8	8
Dead sows	Stk	1	1	2	1	2
<b>Results of farrowing</b>		<b>Goal</b>				
Number of farrowings	Stk	47	46	44	45	48
Live born	Stk	17,5	17,2	16,9	17,5	17,0
Live born, first litter	Stk	15	15,0	14,8	15,1	15,2
Stillborn	Stk	1,3	1,5	1,3	1,6	1,2
Total live born piglets	Stk		791	743	787	816
<b>Weaning Results</b>		<b>Goal</b>				
Weaned litters	Stk		45	45	42	45
Number of weaning	Stk		56	51	53	58
Number of foster sows	Stk		11	6	11	13
Piglets weaned/weaning	Stk	12,7	12,6	12,8	13,0	12,3
Piglets weaned/liter	Stk	15,5	15,6	14,4	16,5	16
Weaning weight	kg	6,5	6,1	6,5	6,3	6
Mortality	%	12	11	13	12	12
Mortality, total	Stk		87	97	94	98

# What can I do tomorrow on my farm?

## Exempel on result registration



Number of sows 1100			1	2	3	4
<b>Served section result</b>		<b>Goal</b>				
Served sows, stk	Stk	52	53	51	50	54
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Piglets weaned/weaning	Stk	12,7	12,6	12,8	13,0	12,3
Piglets weaned/liter	Stk	15,5	15,6	14,4	16,5	16
Weaning weight	kg	6,5	6,1	6,5	6,3	6
Mortality	%	12	11	13	12	12
Mortality, total	Stk		87	97	94	98



Litter number	Division of sows by litters	Now	Can be!
1	23%	7729	9216
2	21%	8034	9228
3	19%	8202	8595
4	15%	6592	6708
5	13%	5679	5713
6	9%	3815	3839
	<b>100%</b>		



2680 pigs/year



# What can I do tomorrow on my farm?

## Exempel on result registration



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Number of sows 1100		Goal	Number of weeks												3- kvart	4- kvart	Year
			1	2	3	4	5	6	7	8	9	10	11	12			
<b>Served section result</b>		<b>Goal</b>															
Served total, stk	Stk	52	53	51	42	44	45										
Served gilts, stk	Stk	12	11	13	7	4	5										
Repeat sows	Stk	3	3	3	4	3	3										
Weaned sows, not served	Stk	2	3	1	2	2	2										
Pregnant sow 4 weeks	Stk	49	48	47	47	47	47										
Pregnancy rate, %	%	94	93	92	92	95	95										
Slaughter sows	Stk	11	10	11	8	8	8										
Dead sows	Stk	1	1	2	1	2	2										
<b>Results of farrowing</b>		<b>Goal</b>															
Number of farrowings	Stk	47	46	44	45	44	48										
Live born	Stk	17,5	17,2	16,9	16,1	16,2	16,4										
Live born, first litter	Stk	15	15,0	14,8	15,7	14,9	15,4										
Stillborn	Stk	1,3	1,5	1,4	2,7	2,8	1,5										
Total live born piglets	Stk		791	743	724	712	787										
<b>Weaning Results</b>		<b>Goal</b>															
Weaned litters	Stk		45	45	43	44	45										
Number of weaning	Stk		52	48	51	53	56										
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Piglets weaned/weaning	Stk	12,7	12,6	12,8	12,5	12,7	12,7										
Piglets weaned/liter	Stk	15,5	14,6	13,6	14,8	14,3	15,7										
Weaning weight	kg	6,5	6,1	6,5	6,3	6	6										
Mortality	%	12	17	18	12	12	12										
Mortality, total	Stk		87	97	87	86	79										
<b>Weaners Results</b>																	
Moved to the weaning	Stk		657	610	638	627	706										
Input weight	Kg.		6,1	6,5	6,3	6	6										
Mortality	%		1,5	2	1,7	1,0	1,0										
Sell pigs	Stk		694	639	677	652	652										

To less served SOWS

Gilts was not prepared

Why we get more still born?

What reason more mortality?

70 piglets weaned less





# What can I do tomorrow on my farm?

## Exempel on result registration



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Number of sows 1100		Goal	Number of weeks													Quarters				Year
			1	2	3	4	5	6	7	8	9	10	11	12	13	1- kvart	2- kvart	3- kvart	4- kvart	
<b>Served section result</b>		<b>Goal</b>																		
Served total, stk	Stk	52	53	51	42	44	53				52	53								
Served gilts, stk	Stk	12	11	13	7	4	11				12	13								
Repeat sows	Stk	3	3	3	4	3	3													
Weaned sows, not served	Stk	2	3	1	2	2	2													
Pregnant sow 4 weeks	Stk	49	48	47	47	47	47													
Pregnancy rate,%	%	94	93	92	92	95	95													
Slaughter sows	Stk	11	10	11	8	8	8													
Dead sows	Stk	1	1	2	1	2	2													
<b>Results of farrowing</b>		<b>Goal</b>																		
Number of farrowings	Stk	47	46	44	45	44	47													
Live born	Stk	17,5	17,2	16,9	16,1	16,2	17,0													
Live born, first litter	Stk	15	15,0	14,8	15,7	14,9	15,2													
Stillborn	Stk	1,3	1,5	1,4	2,7	2,8	1,5													
Total live born piglets	Stk		791	743	724	712	799													
<b>Weaning Results</b>		<b>Goal</b>																		
Weaned litters	Stk		45	45	43	44	45													
Number of weaning	Stk		52	48	51	53	56													
Number of foster sows	Stk		7	3	8	9	11													
Piglets weaned/weaning	Stk	12,7	12,6	12,8	12,5	12,7	12,7													
Piglets weaned/liter	Stk	15,5	14,6	13,6	14,8	14,3	15,7													
Weaning weight	kg	6,5	6,1	6,5	6,3	6	6													
Mortality	%	12	17	18	12	12	11													
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Mortality	%		1,5	2	1,7	1,0	2,0													
Sell pigs	Stk		694	639	677	652	696													

If you react quickly, it is possible to achieve a better situation with the gilts in 2-3 weeks

Stillborn go down due attention with farrowing

Mortality back to normal



# Control points and numbers that have influence on the farm.

## Farm management.



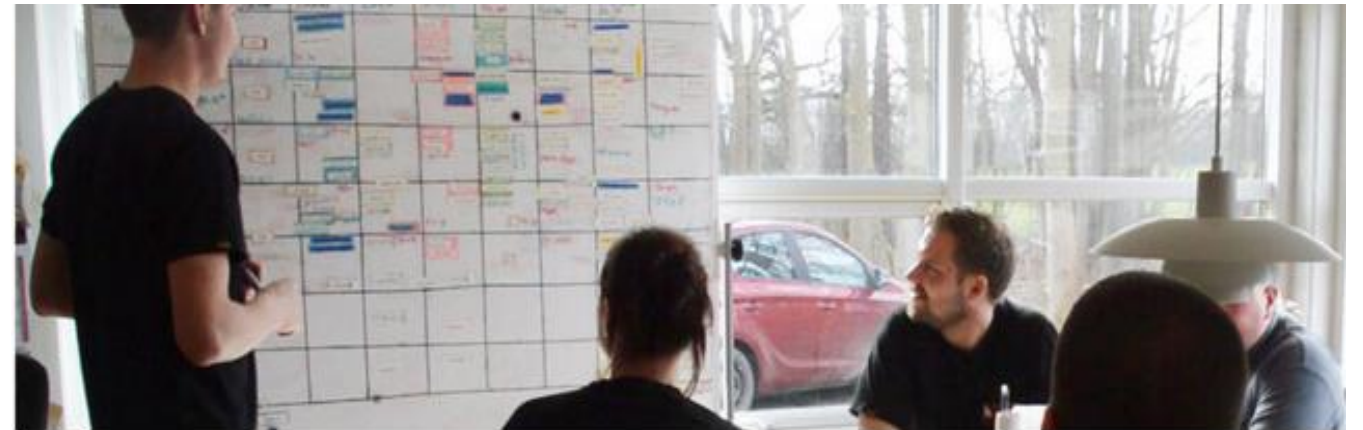
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Reproduktion	Uge nr.													Kvartaler				
	Plan 1	2	3	4	5	6	7	8	9	10	11	12	13	1 kvrt	2 kvrt	3 kvrt	4 kvrt	1-4r
Lebninger total	12,5	11,0	12,5	11,2	10,9	10,5	10,2	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0
Lebninger polte	2,5	1,6	1,8	2,2	1,9	1,7	1,4	1,6	1,3	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Omlebers total	10	21	4	1,4	1,0	1,5	1,4	2,1	2,0	2,1								
Frav. Soer ikke løbet	10							1,4	1,4	1,2								
Drægtige i uge 4	10,1				8,5	10,5												
Drægtige i uge 6	10,6																	
Tomme i farestald	0					2												
<b>Farestald</b>																		
Faringer i alt	10,0	1,6	1,2	1,3	1,2	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Levendefødt i alt	1,370	1,238	1,200	1,163	1,132	1,108	1,085	1,065	1,050	1,030	1,010	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Levendefødt pr. kuld	13,70	10,3	10,0	9,7	9,5	9,3	9,2	9,1	9,0	8,9	8,8	8,7	8,6	8,5	8,4	8,3	8,2	8,1
Dødfødt i alt	100,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
Dødfødt pr. kuld	1,5	1,0	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
Døde pattgrisene %	11,2																	
Fravænnede soer	9,6	1,8	1,2	1,4	1,0	1,1	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Fravænnede grise	1,250	1,050	1,070	1,110	1,070	1,040	1,020	1,000	9,6	9,6	9,6	9,6	9,6	9,6	9,6	9,6	9,6	9,6
Fravænnede pr. kuld	12,50	11,0	10,7	10,3	10,2	10,2	10,0	9,9	9,6	9,6	9,6	9,6	9,6	9,6	9,6	9,6	9,6	9,6
Fravænnede gns. Vægt	7,5	7,3	6,6	7,3	7,5	7,1	7,4	7,4	7,2	7,4	7,2	7,4	7,2	7,4	7,2	7,4	7,2	7,2
<b>Klimastalde</b>																		
Indgang stk.	1,150	1,210	1,090	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070
Vægt ved indsaetelse	7,5	6,9	7,3	7,5	6,9	7,0	7,1	7,2	7,4	7,4	7,4	7,4	7,4	7,4	7,4	7,4	7,4	7,4
Døde stk* 2 %	2,5	2,0	2,0	2,1	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0
Solgte	1,225	1,190	1,090	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070	1,070
<b>Soer</b>																		
Soer slagtet	20																	
Soer døde	1																	

Foto Hatting

## Meetings at the white boards, what effects can be expected:

- Provides structure in employees daily work
- Ensures good coordination of tasks
- Save time in production because everything is done correctly the first time
- Better communication within the team and no misunderstandings
- Creates an overview - both of tasks and goals
- Employees feel more appreciated and gain a greater sense of responsibility
- Creates greater job satisfaction
- It strengthens the economic results of both farms and employees



Landbrugsavisen

Goals should be possible to achieve!



# Questions ?

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Euroopa Maaelu Arengu  
Põllumajandusfond:  
Euroopa investeeringud  
maapiirkondadesse

