Trouble shooting suboptimal reproductive performance

Systematic analysis of herd management data

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Improving Reproductive Performance

Management on the farm

Analysis of the management

Data of sows

Data of the farm

Advice

Improvement of Reproductive Performance

Analysis of farm data

Herd management programme

- General data (number of sows, breeding management, weaning rhythm)
- Statistic of productivity (live born piglets per litter, weaned piglets per litter, age of sows at 1th insemination)
- Time dependent statistic of productivity

Interfarm comparison

- Concept of Reference value analysis

Name of the farm db-planer (herd management programme)
Duration of analysis: 01.01. – 31.12.03

Mating/AI	Total	Gilts	Sows	Value
Total number	569	105 18.5%	464 81.4%	
1th	91 16.0%			
Return to heat	51 9.0%	13 12.4%	38 8.2%	8-10%
% AI	 52.5%			

Farrowing	Total	Gilts	Sows	Value
Litter number	458	74	384	
% litter after AI	59.2%	16.2%	83.8%	
Abortions	5 1.1%			1%
Pregnancy days	115.3			115
Age at first parturition	351.1			
Farrowing rate %	79.4			> 85%
Piglets: total/litter Live born/litter Stillborn/litter	10.1 9.9 0.2	9.4 9.4	10.2 10.0 0.2	> 12 > 10-11
Piglets: total/sow+year live born/sow+year	23.0 22.6			

Weaning	Total	Gilts	Sows	Value
Weaned litters	450	71 15.8 %	379 84.2%	
Nursing days	23.1			
Weaning to insem. interval	6.2 days			
Loss of piglets	512 11.4 %	50 7.2 %	462 12.1%	< 10%
Weaned piglets/litter	8.9	9.1	8.8	> 9-10
Weaned piglets/ sow + year	20.2			23-25
Litters/sow + year	2.28			2.35

Selection rate

Selection of sows after weaning	39.4%	(80 %)
after mating	60.6%	(20 %)
Mean litter number at selection	6.1	(5.0-5.5 %)
Mean duration of productivity (year)	2.6	(2.0-2.2 %)
Substitution	45.7 %	(35-40%)

Summary

- Live born piglets ↓↓
- Loss of productivity days ↑↑
- Number of gilts returning to heat ↑
- Loss of piglets in sows ↑
- Arise in the ratio of old animals to the total number of animals

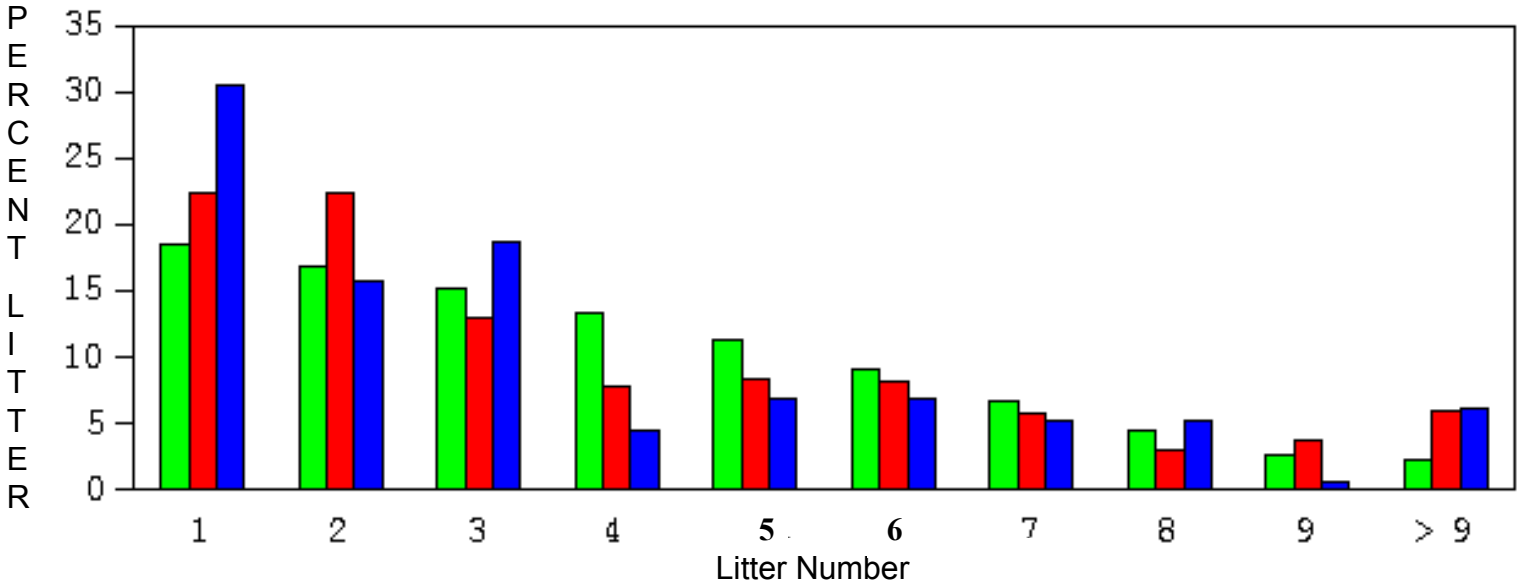
Concept of Reference value analysis

AI-Center:
Production data of over 100 farms
Herd management programme

Ranking
25% of the best farms form the reference pool

Reference value analysis – interfarm comparison
Productivity of farm xy – productivity of reference pool
- Age of sows
- Breeding management
- Number of piglets in comparison to litter number
- Comparison of the results of the last 6 month to the previous year

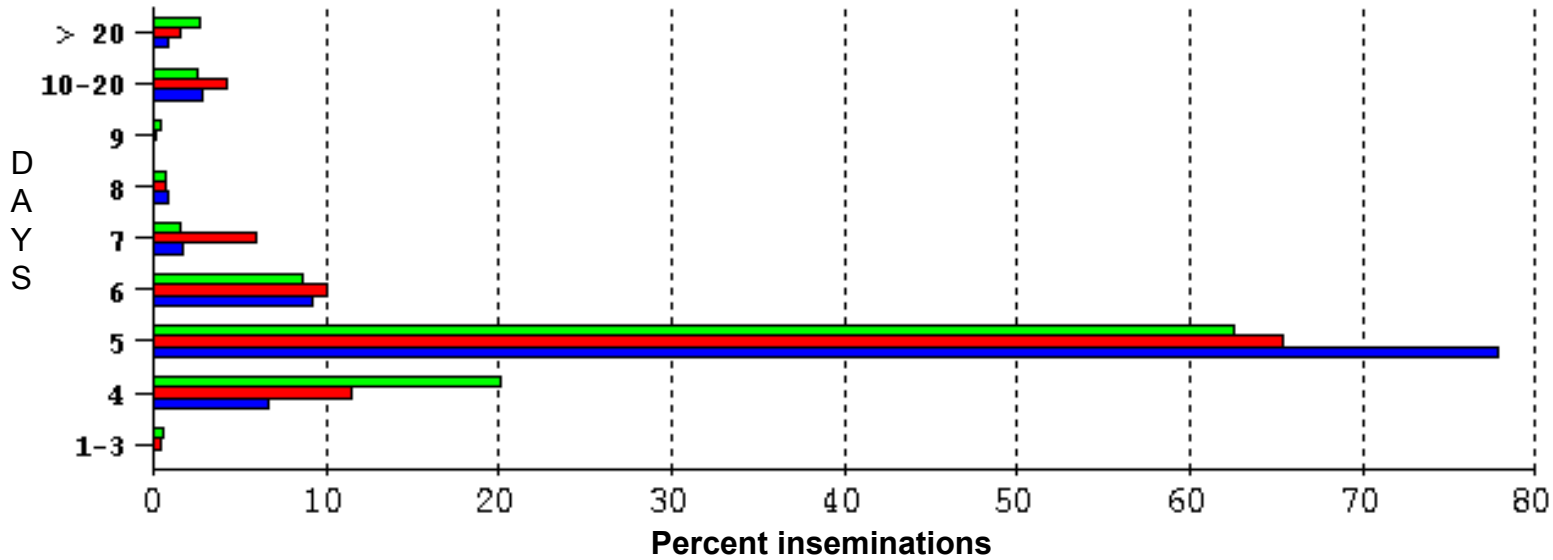
Age of the sows



Zeitraum 1. 5.2002 - 30. 4.2003 1.11.2002 - 30. 4.2003

Mean	N	1	2	3	4	5	6	7	8	9	> 9
11.2	20	18.5	16.8	15.2	13.4	11.3	9.0	6.6	4.5	2.6	2.2
9.7	588	22.3	22.3	12.9	7.7	8.3	8.2	5.8	2.9	3.7	6.0
9.9	177	30.5	15.8	18.6	4.5	6.8	6.8	5.1	5.1	0.6	6.2

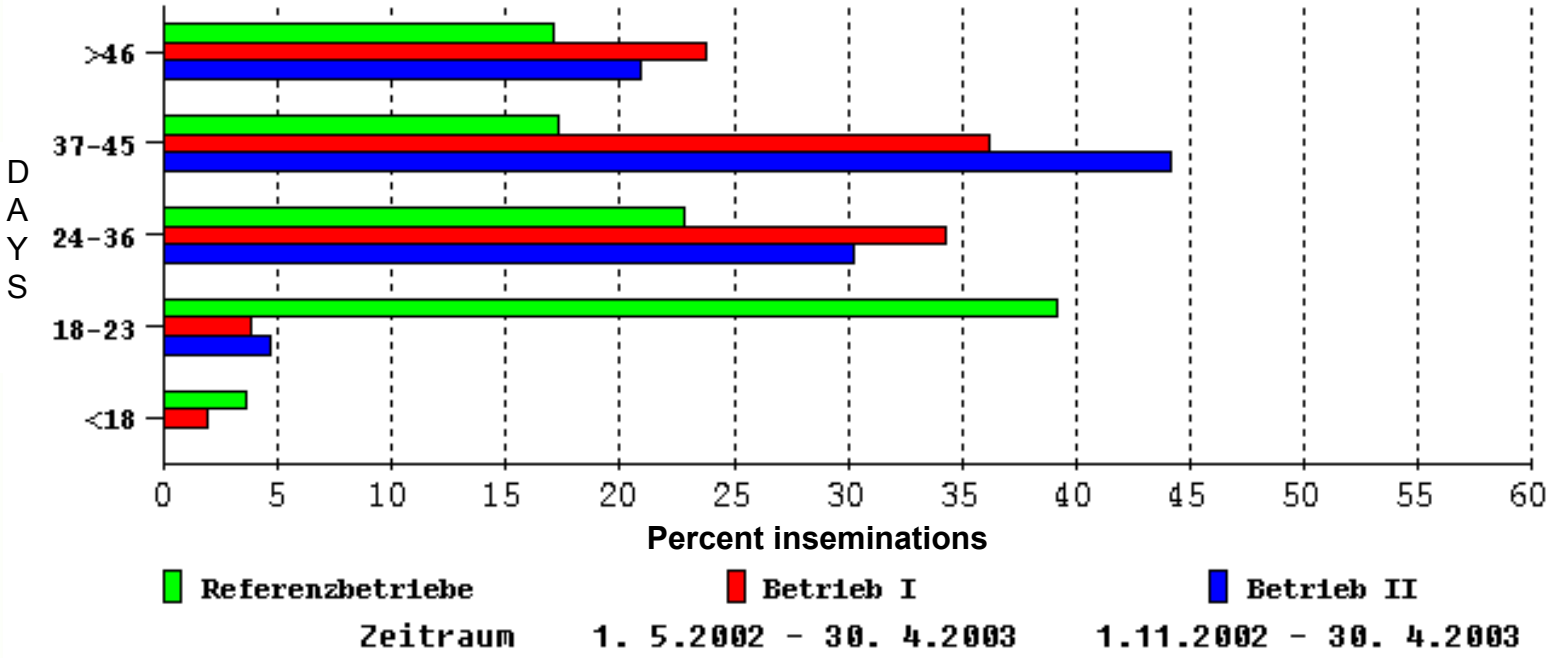
Percentage 1st insemination after weaning



Zeitraum 1. 5.2002 - 30. 4.2003 1.11.2002 - 30. 4.2003

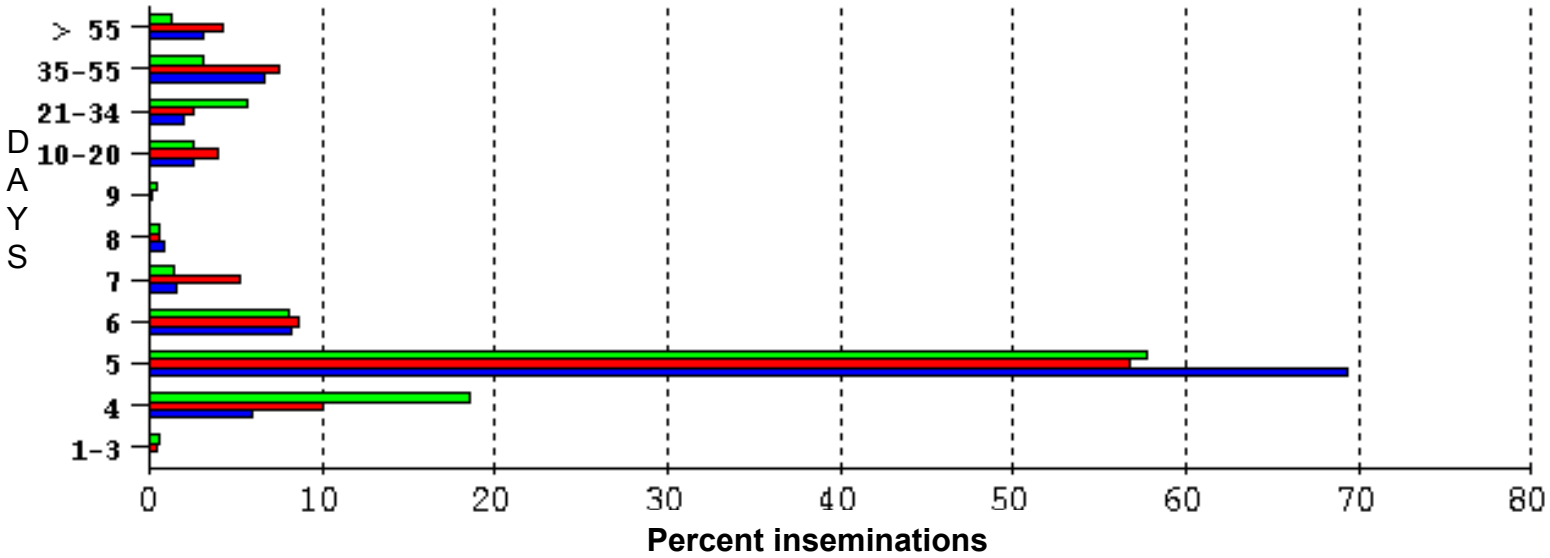
Mean	N	1-3	4	5	6	7	8	9	10-20	> 20
83.8	20	0.6	20.1	62.6	8.7	1.5	0.7	0.4	2.6	2.7
56.2	699	0.4	11.4	65.4	10.0	6.0	0.7	0.1	4.3	1.6
34.1	348	0.0	6.6	77.9	9.2	1.7	0.9	0.0	2.9	0.9

Percentage > 1st insemination after weaning



Mean	N	<18	18-23	24-36	37-45	>46
83.8	20	3.6	39.2	22.8	17.3	17.1
56.2	105	1.9	3.8	34.3	36.2	23.8
34.1	43	0.0	4.7	30.2	44.2	20.9

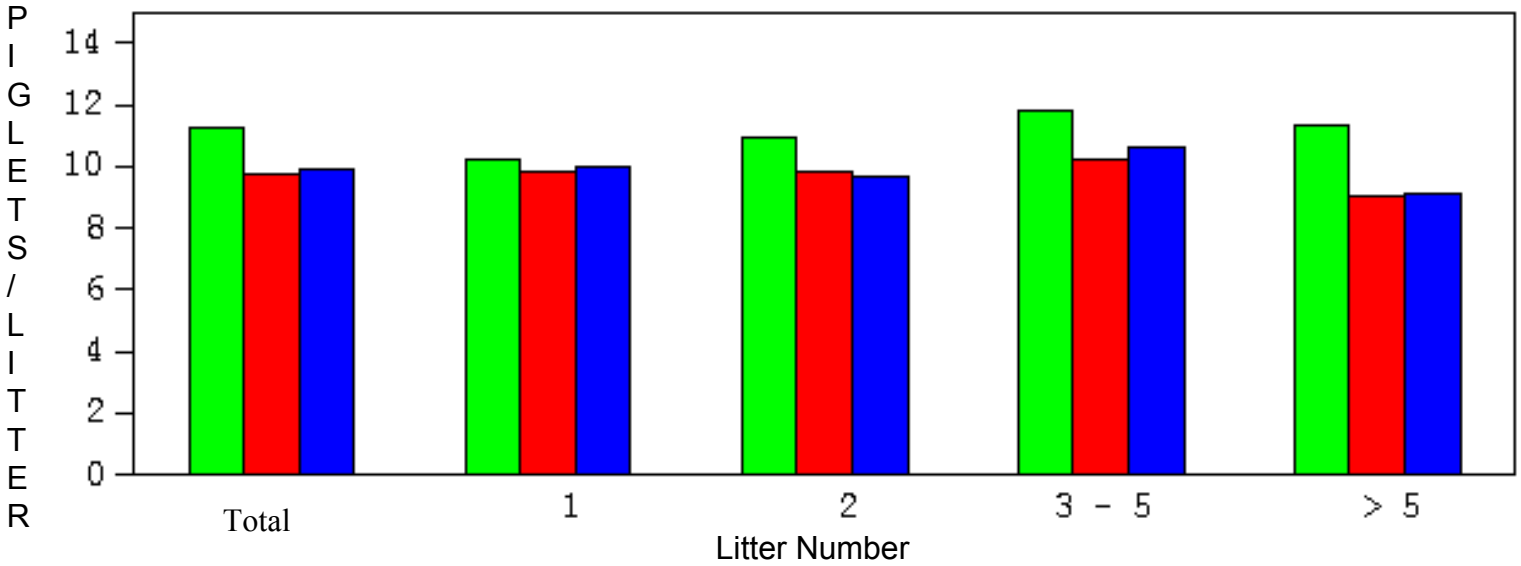
Percentage of all inseminations after weaning



Zeitraum 1. 5.2002 - 30. 4.2003 1.11.2002 - 30. 4.2003

Mean	N	1-3	4	5	6	7	8	9	10-20	21-34	35-55	> 55
83.8	20	0.5	18.6	57.8	8.0	1.4	0.6	0.4	2.5	5.6	3.1	1.3
56.2	804	0.4	10.0	56.8	8.7	5.2	0.6	0.1	3.9	2.6	7.5	4.2
34.1	391	0.0	5.9	69.3	8.2	1.5	0.8	0.0	2.6	2.0	6.6	3.1

Mean live born piglets dependent on litter number

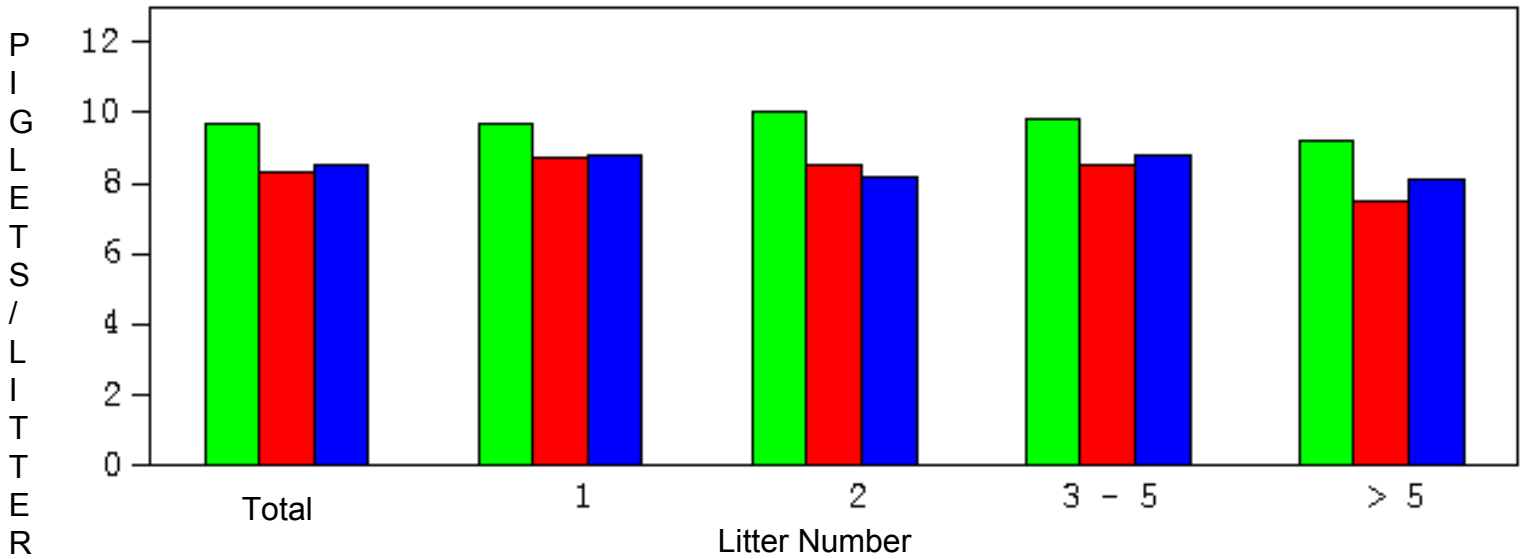


Referenzbetriebe | Betrieb I | Betrieb II

Zeitraum 1. 5.2002 - 30. 4.2003 | 1.11.2002 - 30. 4.2003

Mean	N	Total	1	2	3 - 5	> 5
11.2	20	11.2	10.2	10.9	11.8	11.3
9.7	588	9.7	9.8	9.8	10.2	9.0
9.9	177	9.9	10.0	9.7	10.6	9.1

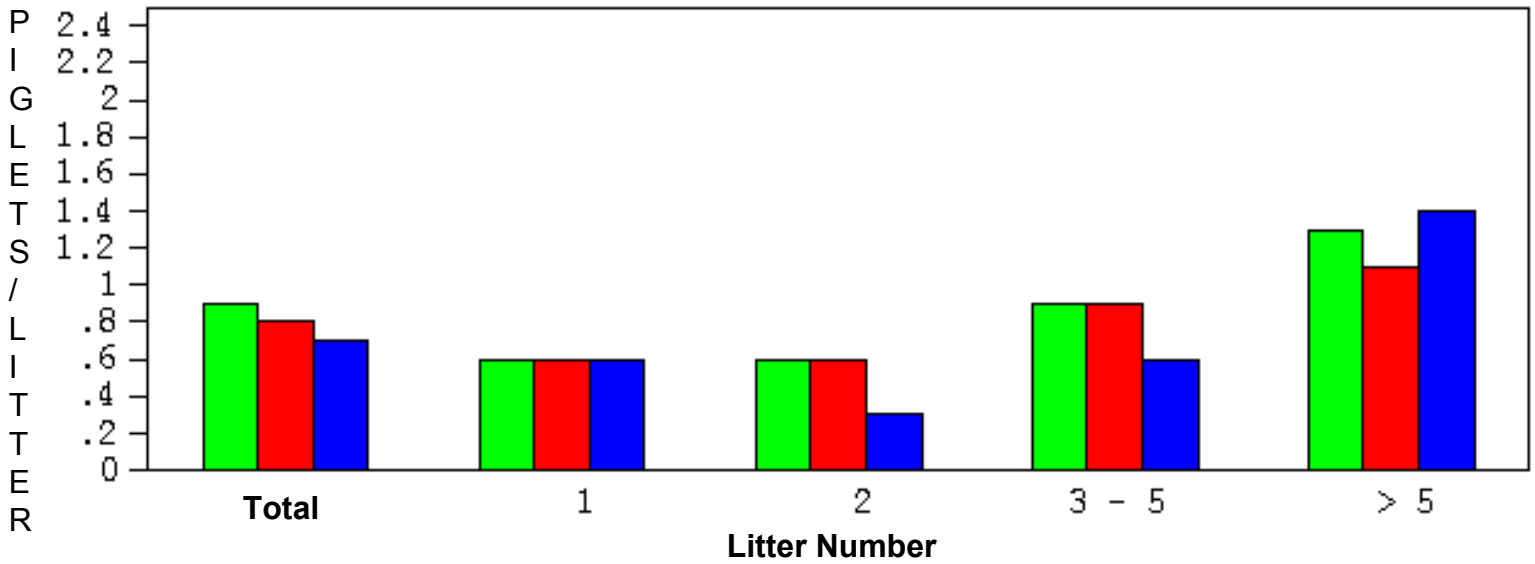
Mean weaned piglets dependent on litter number



Zeitraum 1. 5.2002 - 30. 4.2003 1.11.2002 - 30. 4.2003

Mean	N	Total	1	2	3 - 5	> 5
9.7	20	9.7	9.7	10.0	9.8	9.2
8.3	588	8.3	8.7	8.5	8.5	7.5
8.5	177	8.5	8.8	8.2	8.8	8.1

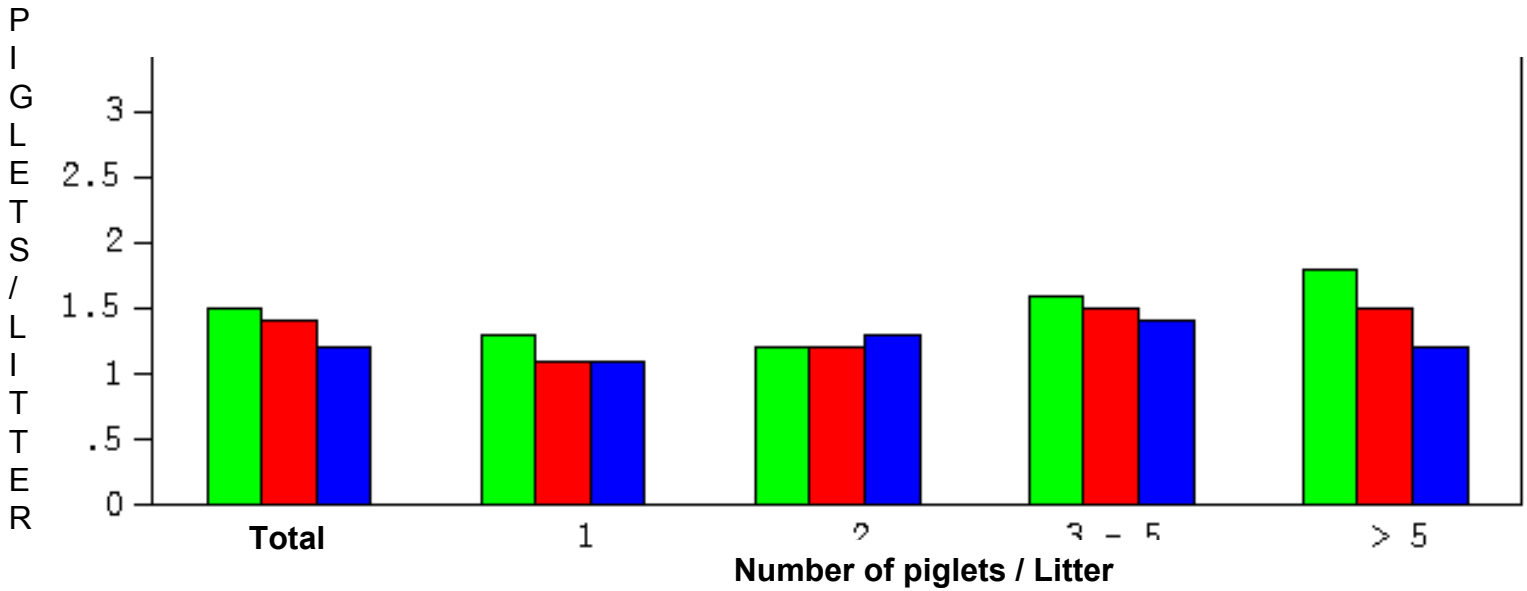
Mean stillborn piglets dependent on litter number



Zeitraum 1. 5.2002 - 30. 4.2003 1.11.2002 - 30. 4.2003

Mean	N	Total	1	2	3 - 5	> 5
11.2	20	0.9	0.6	0.6	0.9	1.3
9.7	588	0.8	0.6	0.6	0.9	1.1
9.9	177	0.7	0.6	0.3	0.6	1.4

Mean loss of suckling pigs dependent on litter number

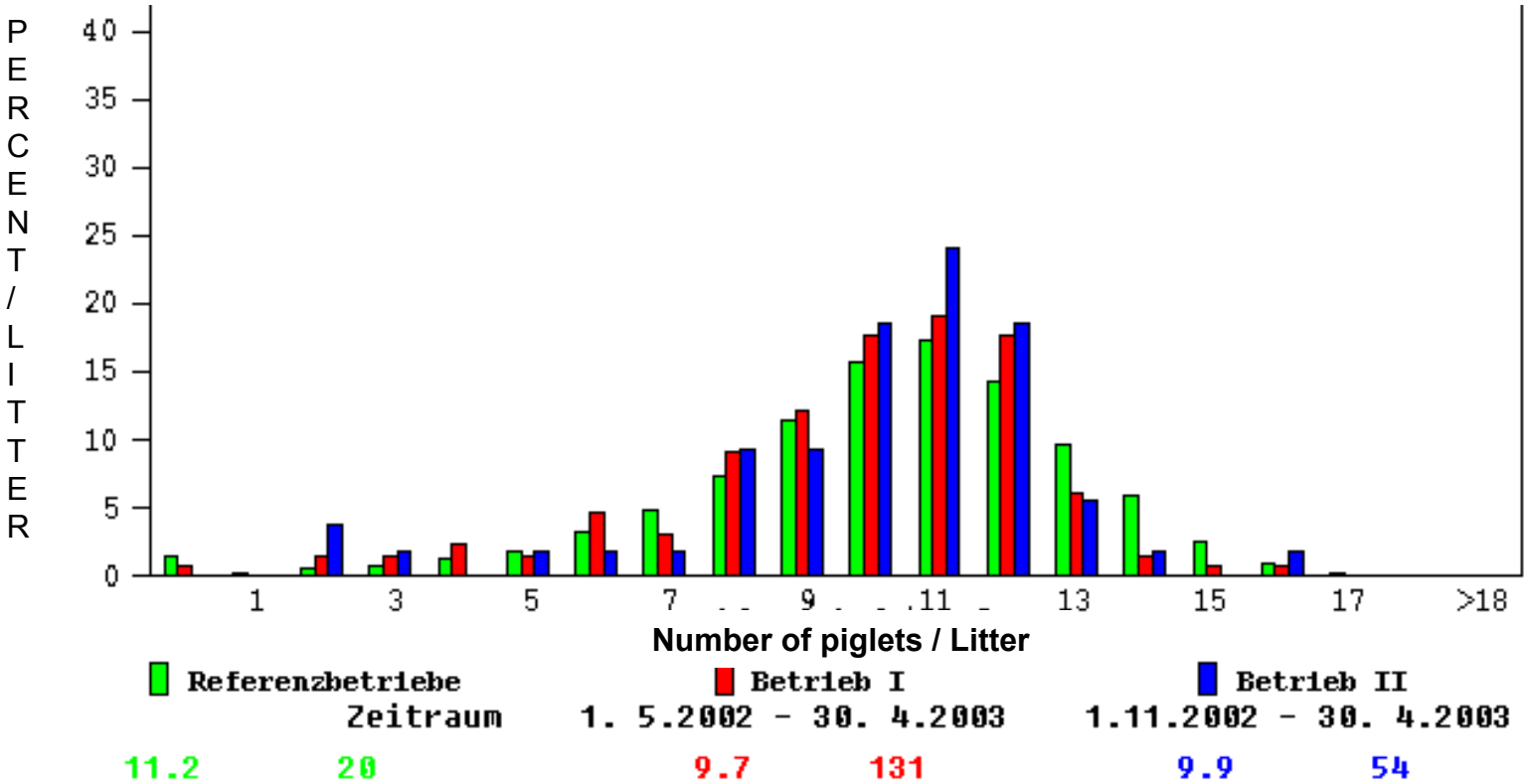


Referenzbetriebe | Betrieb I | Betrieb II

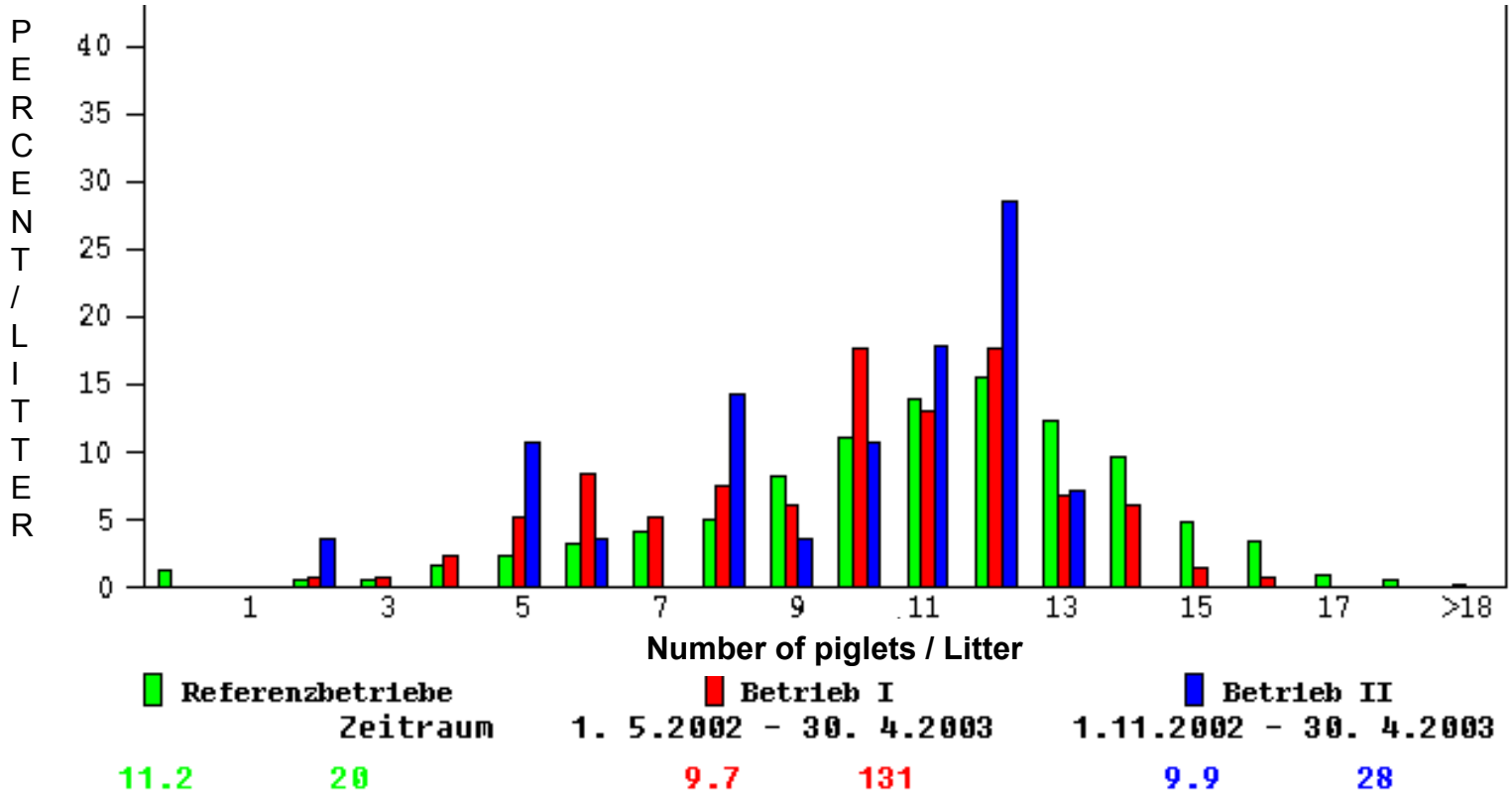
Zeitraum: Betrieb I 1. 5.2002 - 30. 4.2003; Betrieb II 1.11.2002 - 30. 4.2003

Mean	N	Total	1	2	3 - 5	> 5
11.2	20	1.5	1.3	1.2	1.6	1.8
9.7	588	1.4	1.1	1.2	1.5	1.5
9.9	177	1.2	1.1	1.3	1.4	1.2

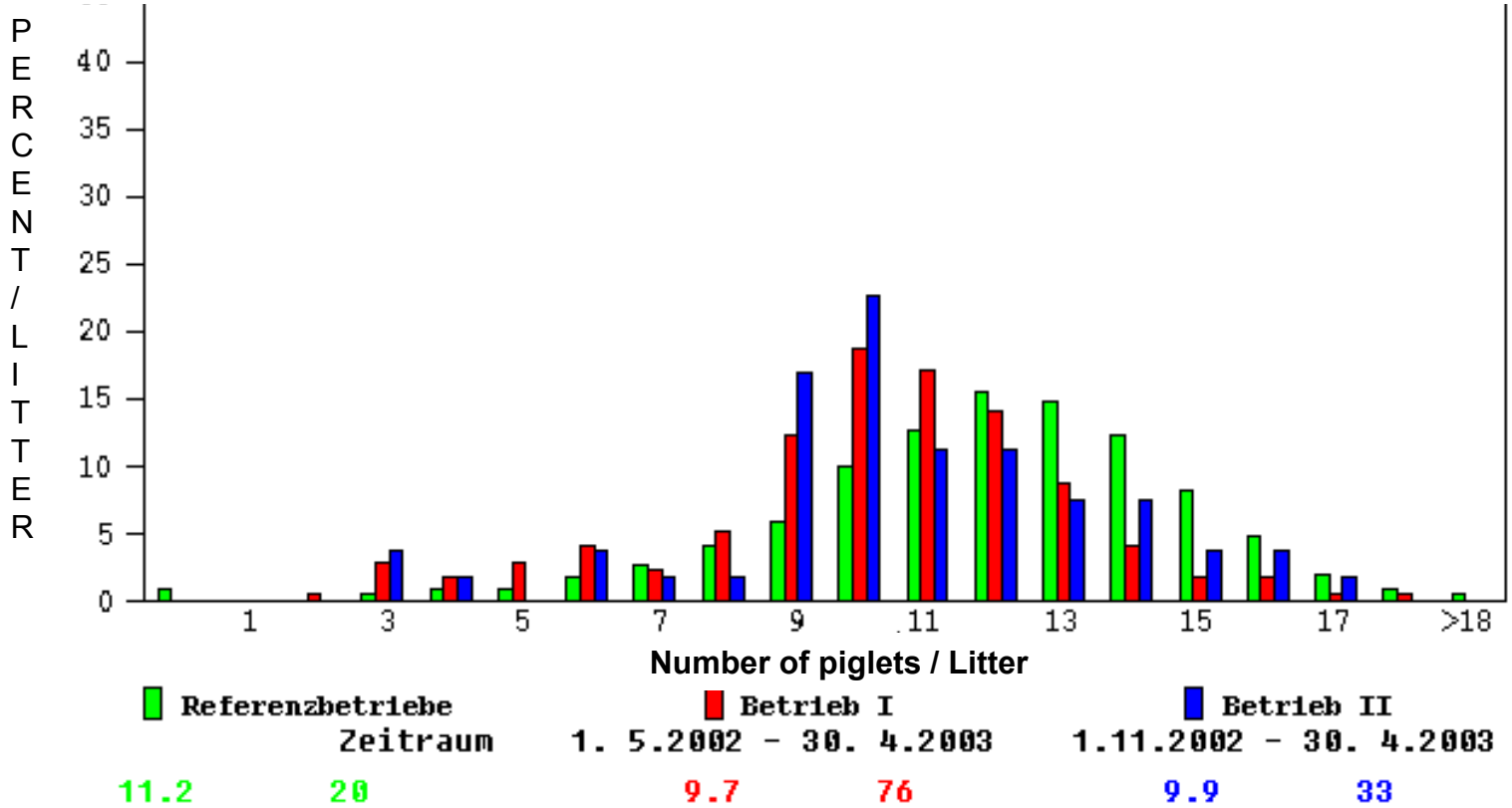
Distribution of live born piglets, first litter



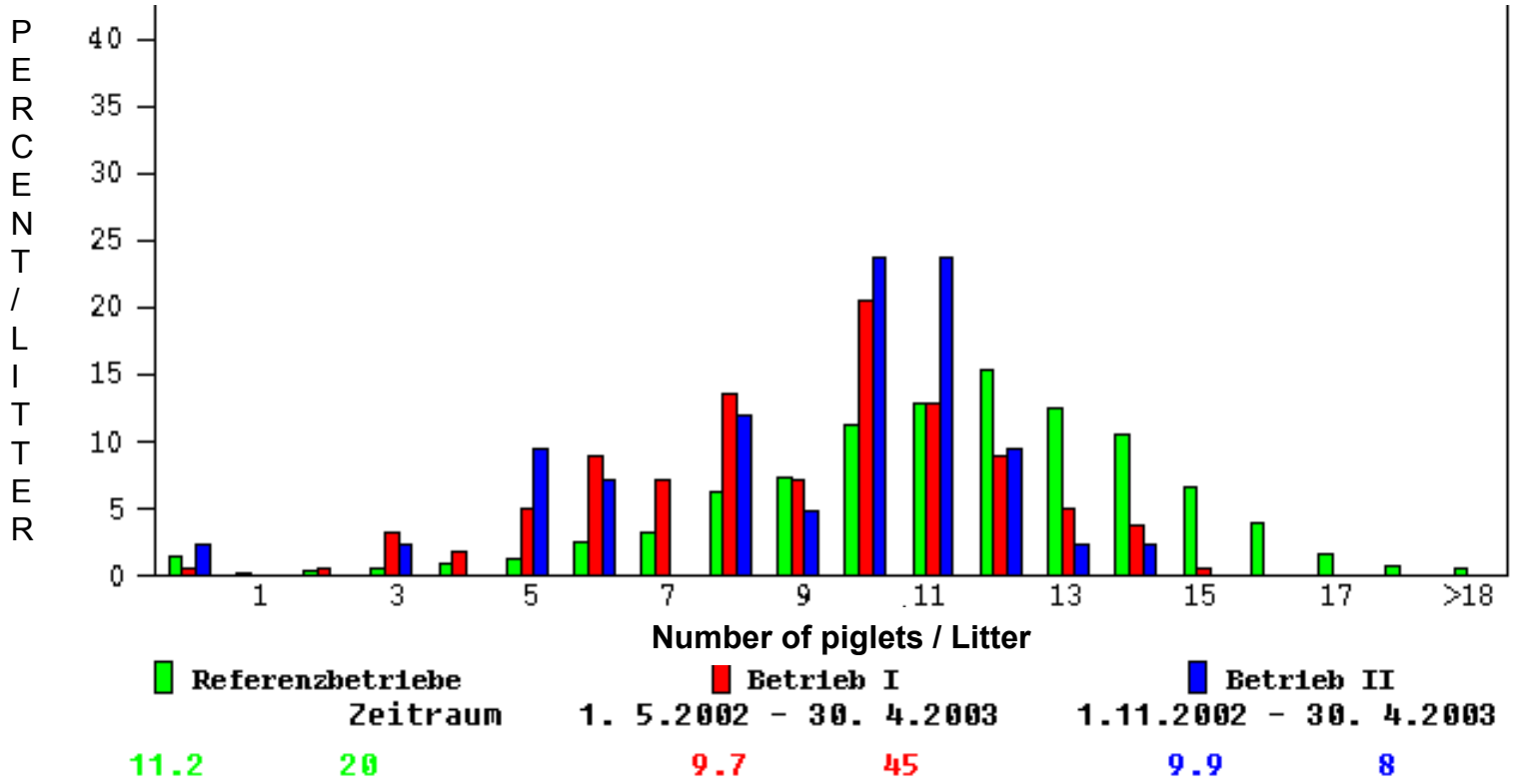
Distribution of live born piglets, 2nd litter



Distribution of live born piglets, 3rd - 5th litter



Distribution of live born piglets, more than 6th litter



Discussion points

- Breeding management
  - Find out optimal time for insemination
  - Avoiding stress after mating
- Management of non-pregnant sows
  - Documentation of return to heat sows
  - Improving selection of return to heat pigs
  - Improving detetion of pregnancy
- Management in gilts
  - Condition at 1th mating
  - Intensivation of stimulation
  - Condition during pregnancy

Conclusions

- Herd management data form the excellent basis for a systematic analysis of weakness and short comings
- Reference value analysis as an interfarm comparison is a meaningful supplement to the evaluation of herd management data
- A graphical representation of the fertility parameters enables clear explanation of the discussion points in the farm
- The concept of farm data analysis forms an optimal instrument for giving advice on fertility management

Thank you for your attention!