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Management of reproduction and parturitions in sows

A. Ježková, J. Heimlich and L. Stádník, Czech University of Life Sciences, Department of Animal Sciences, Kamýcká, 165 21 Prague, Czech Republic

Synchronizing parturition has many benefits, such as allowing staff to supervise farrowing, minimizing holiday and weekend work. Inducing sows to farrow on gestation length of 114 days, or earlier, will result in premature delivery of some piglets. The objectives of this study were to evaluate differences in performance of piglets born to induced and no induced sows; to determine the effectiveness of controlled parturitions, to evaluate the management of reproduction in sows in selected farm of commercial rearing of pigs. The reason of implementation of method of controlled parturitions was the reduction of stillborns piglets in litters.

Material and methods

The hormonal preparations (Oestrophan inj. ad us. vet., Hypophysin ® LA inj. ad us. vet., Oxyto-kel 10 inj. ad us.vet.) were used. For assessment of sows´ reproduction results the total of 821 litters of 240 sows in period of 24 months was monitored. The first group - FG (without hormonal preparations – 12 months of observation – May 2004 to April 2005) contained results of 472 litters and second group – SG (with controlled parturitions – May 2005 to April 2006) contained results of 349 litters. Litter size - all of born piglets, live born piglets, inter parturition period, days to first insemination, service period, were evaluated.

Statistics

The results were calculated by statistical program SAS, linear model (analysis of variation), by procedure GLM (procedure GLM – SAS Institute, 1988).

$\mathbf{P_{ijklm} = Y_j + L_k + T_l + e_{ijklm}}$

$\mathbf{P_{ijklm}}$ = parameter,
$\mathbf{Y_j}$ = fixed effect of year; 2002-2005,
$\mathbf{L_k}$ = fixed effect of litter order,
$\mathbf{T_l}$ = fixed effect of treatment; 1, 2 - treatment, no treatment,
$\mathbf{e_{ijklm}}$ = random residual effect.

Results

There was find out relevant improvement in SG of sows in these characteristics: all of born piglets (+0.8504 pc), live born piglets in litter (+1.1457 pc), weaned piglets (+1.1457 pc) per sow; shortening of inter parturition period (-8.1272 days), interval to first insemination (-3.9270 days); service period (-3.9607 days); number of stillborns was lowered to 3.9607% and mortality of piglets to 9.8794%. Number of parturitions per year (turnover) was up from 0.1258 to 2.4405 litters /sow/year.

Conclusion

Farrowing induction enhances piglet survival with association with improved supervision and neonatal care.

Acknowledgements:

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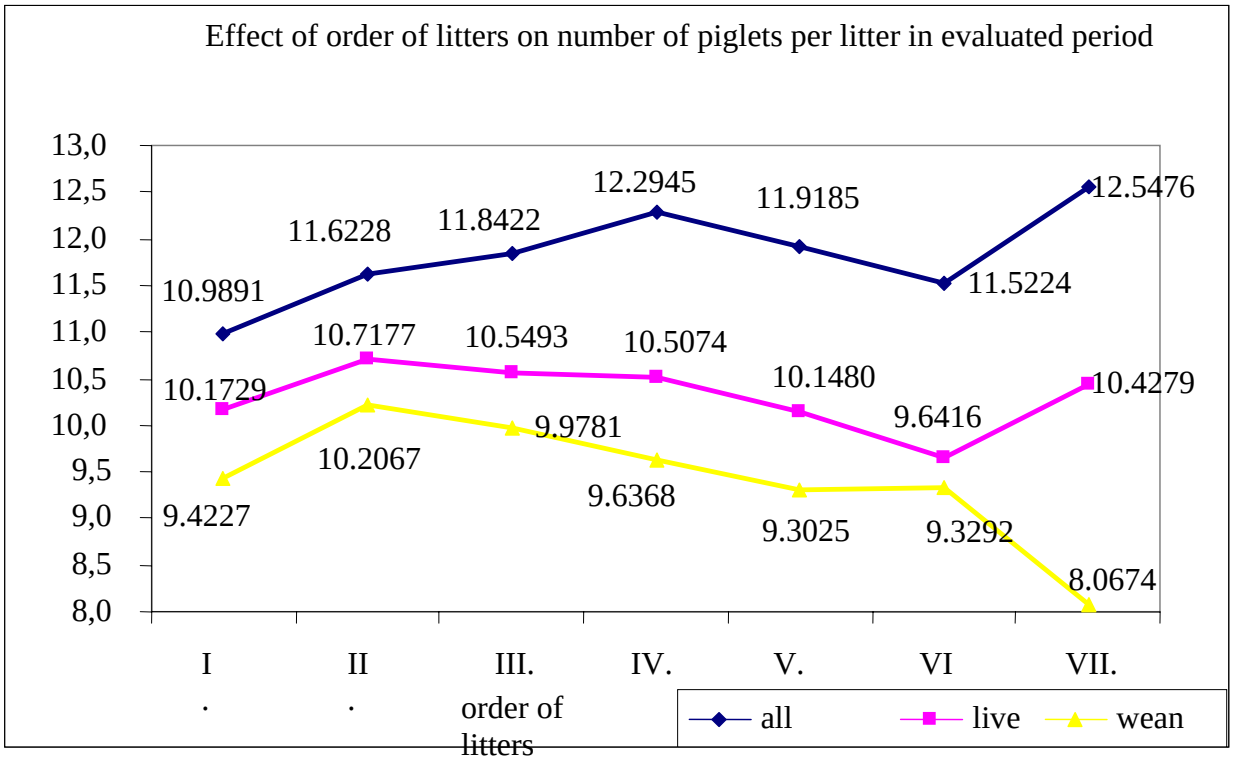
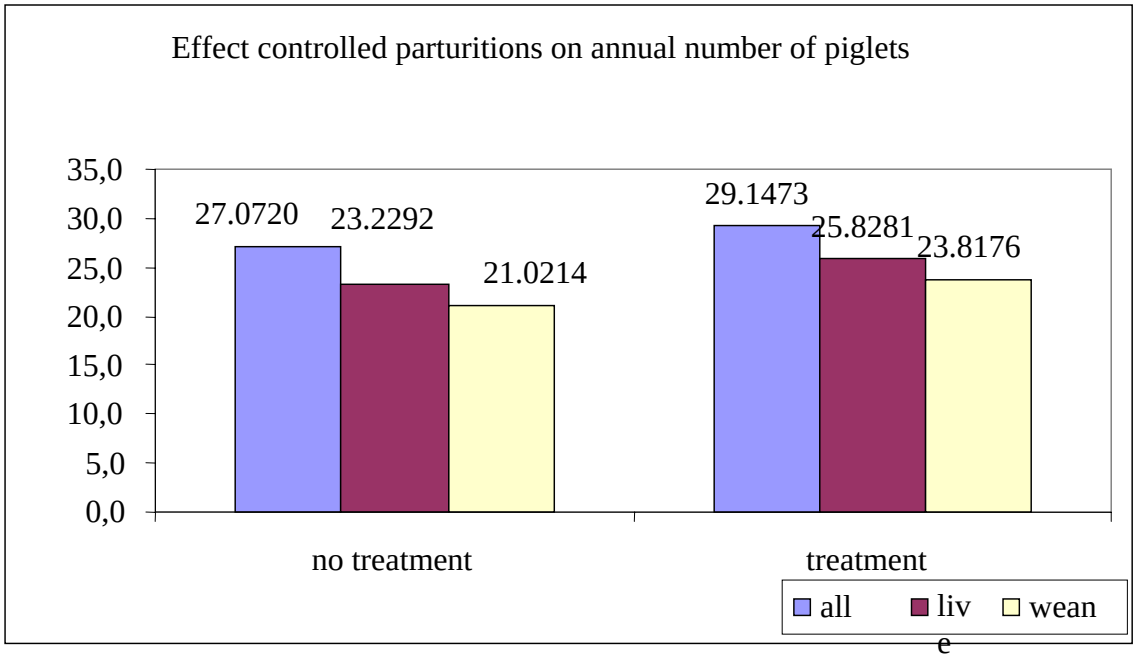
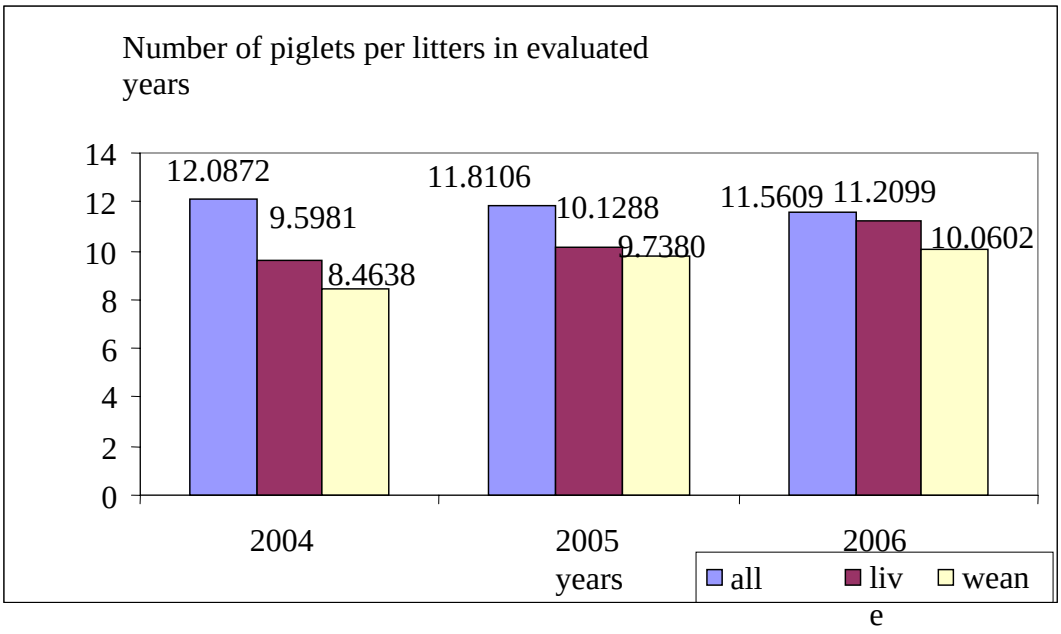
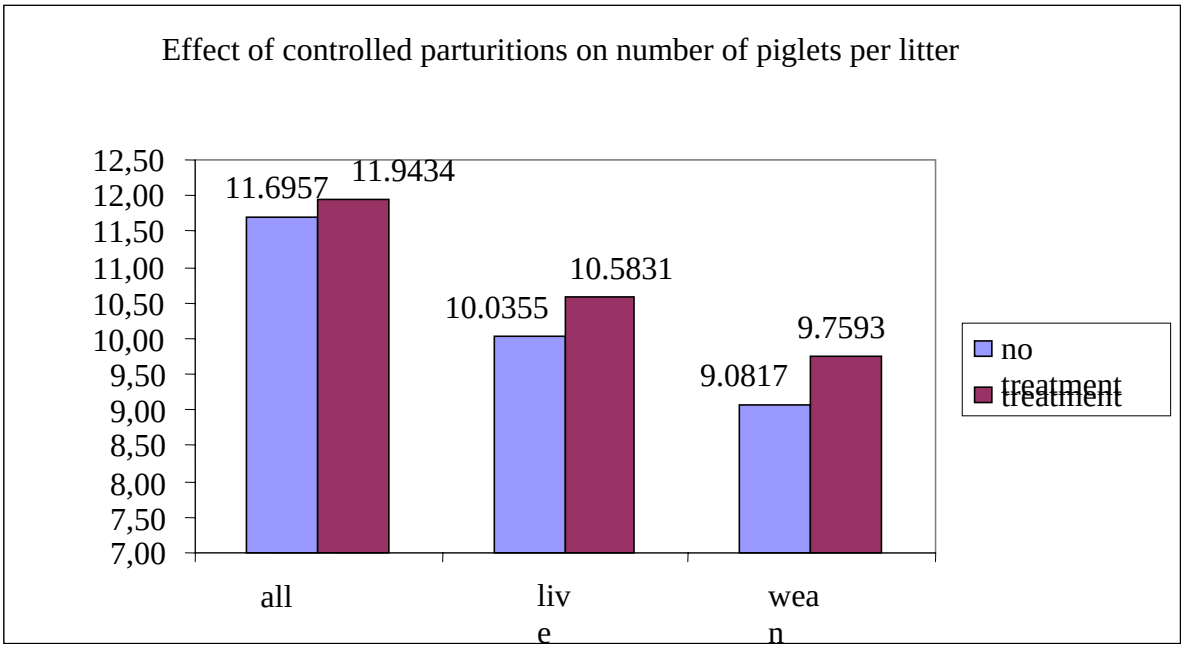
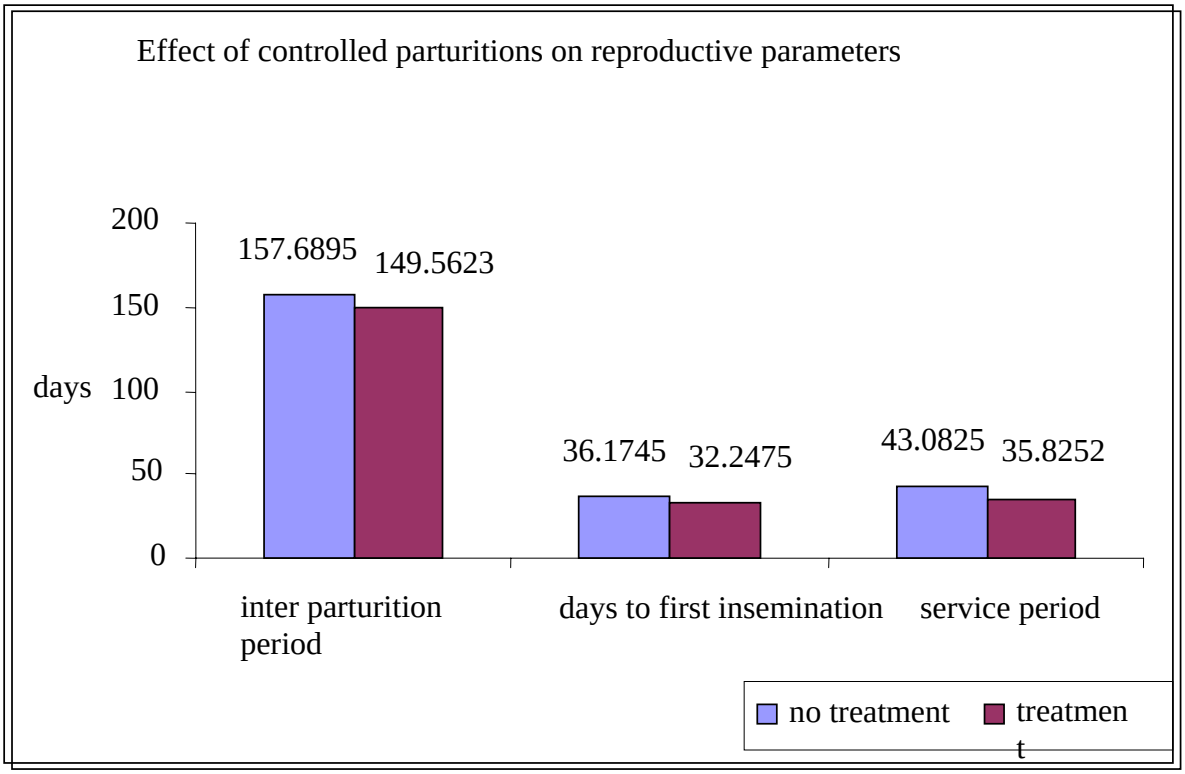





Number of piglets per litters in evaluated years
14
12
10
8
6
4
2
0
12.0872
9.5981
8.4638
11.8106
10.1288
9.7380
11.5609
11.2099
10.0602
2004
2005
2006
years
all
liv e
wean


Effect of controlled parturitions on number of piglets per litter
12,50
12,00
11,50
11,00
10,50
10,00
9,50
9,00
8,50
8,00
7,50
7,00
11.6957
11.9434
10.0355
10.5831
9.0817
9.7593
all
liv e
wea n
no treatment
treatment



Reproductive parameters	Effect (improvement/reduction of parameter)
Number of all piglets per litter	**+0.85 piglets/litter (2.08 piglets/year)**
Number of live born piglets per litter	**+1.06 piglets/litter (2,60 piglets/year)**
Number of weaned piglets per litter	**+1.15 piglets/litter (2.80 piglets/year)**
Reduction of losses in still-born piglets	**to 3.96 % (of 27.93%)**
Reduction of losses of piglets in farrowing house	**to 5.92 % (of 62.30%)**
General reduction of losses	**to 9.88 % (of 41.29 %)**
Inter parturition interval	**- 2.50 days (of 5.15 %)**
Days to first insemination	**- 0,76 days (of 10.86 %)**
Service period	**- 3.27 days (of 16.85 %)**
Turn over	**+ 0,13 (of 5.43%)**