

# THE PIGLET'S BEHAVIOR AFTER BIRTH ACCORDING TO THE BIRTH WEIGHT\*\*

V. Lorencová\*<sup>1</sup>, L. Mlyneková<sup>1</sup>, J. Mlynek<sup>1</sup>

<sup>1</sup>Department of Animal Husbandry, Faculty of Agrobiological and Food Resources, Slovak Agricultural University, Nitra, Slovakia

\*Corresponding author: [vierka.lorencova@gmail.com](mailto:vierka.lorencova@gmail.com)

\*\* \*\* Original scientific paper, presented at 2<sup>nd</sup> International Congress on Animal Husbandry “New Perspectives and Challenges of Sustainable Livestock Farming”, Belgrade, 3.-5. October, 2007

**Abstract:** The aim of the work was the piglet's behaviour observation till the fourteenth day after birth. We expected some differences in behaviour between animal groups according to their birth weight.

Thirty-five animals from five litters were included in the experiment. We divided the animals into two groups according to their birth weight: in the first group there were piglets with their birth weight over 1.45 kg; in the second group piglets with their birth weight to 1.35 kg were observed.

In ethological observations we watched sleep, sucking and locomotion activity. Piglets from the first group slept longer during first three days after their birth. These piglets thus slept generally longer. We noticed more intensive sleeping of piglets from the second group from the eighth day to the tenth day of life.

The sucking goes down rapidly from the first to the fourth day of life. An equalization of sucking with small decreases and increases comes from the seventh day to the end of observation. By the birth weight, piglets from the first group sucked less until their seventh day.

The locomotion of piglets from first group gradually decreased till the fourth day; they moved the most on the fifth day. The locomotion of piglets from second group increased slightly from the fourth to the ninth day.

**Key words:** piglets, ethological observation, sleeping, sucking, locomotion activity

## Introduction and literature review

Pig breeding in Slovakia has a long tradition. The category which establishes the results of breeding is that of nursing sows with piglets. Thus it is

necessary to create an optimal well-being for a sow and piglets, though there are different demands of animals in this category.

Milk of sow has an essential position in the growing of piglets. For piglets it is the main source of nutrition. The relation between sow and piglets (except breed, order of litter and level of nutrition) is a significant and stimulating factor which influences the production of milk.

*Smazalová and Illmanová (2003)* present that passivity of sow during the birth and few hours after it is an important feature of maternal behaviour of sow. This behaviour does not disturb piglets' reception of colostrums and protects them from being pressed by the sow.

By *Illmanová et al. (2000)*, the nursing sow has a tendency to synchronize its suckling.

*Debrecéni (2001)* writes that the sucking takes four minutes in the first week of life. Piglets in the observed litters sucked longer because they were looking for the position in teats in first hours.

*Magic (1996)* presents that the birth weight of piglets has a big impact on the sickness rate and on the death loss. Heavier piglets are stronger and it is easier for them to get to the front teats. Weaker piglets suck only two or three times out of five daily sucking.

*Čeřovský (2005)* presents that the corporal reserves and limited thermoregulation of newborn piglet help to protect against late reception of colostrums after birth. An essential factor is vitality of piglet which is demonstrated by the ability to stand, to start the locomotion activity for finding of teats, biting it and receiving of colostrums.

## **Material and methods**

The aim of work was the piglet's behavior observation till the fourteenth day after birth at The Experimental Centre of Livestock of the Department of Animal Husbandry of Slovak Agricultural University in Nitra. We expected differences in behavior in animal groups according to the birth weight. The experiment we made in The Experimental Centre of Livestock, in standard condition for nursing sows with piglets. Animals were born in the maternity of The Experimental Centre. Piglets were of sow Large white breed and of boar Landrace breed. There were thirty-five animals from five litters in the experiment. These animals were divided into two groups according to the birth weight. In the first group there were piglets with the birth weight to 1.35 kg; in the second group were piglets with the birth weight over 1.45 kg.

Ethological observations were made in the maternity of the experimental centre immediately after the birth by two 24 hours' observations in which we watched sleep, sucking and locomotion activity. We made eight

hours' daily observations till the fourteenth day. All ethological observations were made by continual methods with the ethogram records.

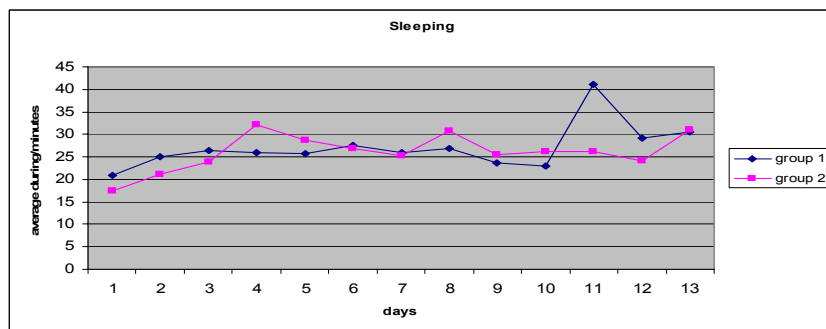
The observation was processed by MS Excel.

## Results and discussion

### 1. Sleep

In the chart 1 we present ethological observation in sleeping. This chart show that the piglets from the first group slept longer in first 3 days after the birth. In other words – these piglets slept generally longer. In the second group piglets slept longer the fourth and fifth day. The sleeping was stabilized in both groups of piglets on the sixth and seventh day. We noticed more intensity of sleeping of piglets from the second group from the eighth day to the tenth day of life.

The castration of boards was made on the tenth day of life. On the eleventh day we noticed the longest sleep of piglets from the first group and on the twelfth and thirteenth day the length of sleep was stabilized.



**Figure 1. Sleeping**  
**Slika 1. Spavanje**

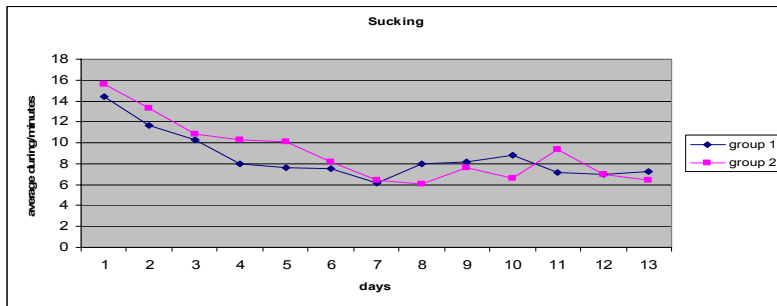
### 2. Sucking

In the chart 2 we present ethological observation of sucking. By the maximum and average values of all piglets, we can say, that the sucking from the first to the fourth day of life went down quickly and from the seventh day to the end of the observation there came an equalization of sucking with some small decreases and increases.

By *Illmanová et al. (2000)*, the nursing sow has a tendency to synchronize its suckling. This fact was confirmed in our experiment, when all sucking took place at the same time.

As for the birth weight, piglets from the first group sucked relatively less until the seventh day and after the seventh day to tenth, sucking increased. Sucking decreased on the eleventh day after the castration in the first group. However; sucking increased in the second group. The time of sucking was stabilized on the twelfth and thirteenth day.

*Magic (1996)* presents that the birth weight of piglets has a big impact on the sickness rate and on the death loss. This fact was proved in our experiment, when on the first day piglets from the second group sucked less than the piglets from the first group.

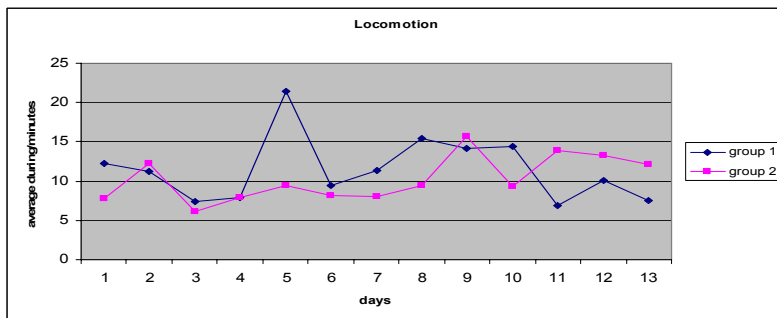


**Figure 2. Sucking**  
**Slika 2. Sisanje**

### 3. Locomotion activity

In the chart 3 we present ethological observation of sucking.

From the chart, we can conclude that the locomotion of piglets from the first group decreased gradually to the fourth day and they moved most on the fifth day. From the sixth to the tenth day, the locomotion had a moderate increase and since the tenth day the locomotion decreased until the end of observation.



**Figure 3. Locomotion**  
**Slika 3. Kretanje**

In the first group of piglets the locomotion had increased to the second day, on the third day we noticed the decrease of the average length of locomotion and from the fourth to the ninth day the locomotion had a moderate increase. On the ninth day it came up to the maximum (15.68 minutes). The locomotion decreased sharply on the tenth day. This activity increased on the eleventh day due to the castration and later - to the end of observation – it had a moderate decrease.

From the chart we may state that the piglets from the first group moved most on the fifth day in an average length of 21.45 minutes. We suppose that it could have been caused by researching of environment by piglets.

We expect that the acoustic contacts between the sow and piglets do not describe the condition of piglets, but they serve for creating an acoustic relation between the mother and piglets. Our findings correspond with *Illmanová et al.* (2001).

## Conclusion

We watched sleep, sucking and locomotion activity during ethological observation. We found that piglets from the first group slept longer during the first three days after the birth. We noticed bigger intensity of sleeping of piglets from the second group from the eight to the tenth day of life. We can say that piglets from the first group slept generally longer.

By the maximum and average values of all piglets, we can say, that the sucking from the first to the fourth day of life goes down quickly and from the seventh day to the end of the observation there comes a stabilization of sucking with just small decreases and increases. By the birth weight, piglets from the first group sucked relatively less until the seventh day and then sucking increased after the seventh day to the tenth.

From the ethological observation, we can see that the locomotion of piglets from the first group gradually decreased to the fourth day. The piglets moved most on the fifth day. In the second group of piglets the locomotion increased to the second day. On the third day there was a decrease of average length of locomotion and from the fourth to the ninth day the locomotion had a moderate increase.

## **Ponašanje prasadi nakon rođenja u odnosu na telesnu masu**

*V. Lorencová, L. Mlyneková, J. Mlynek*

### **Rezime**

Krmače i prasad predstavljaju kategoriju od koje zavise rezultati odgoja. Zbog toga je neophodno stvoriti optimalnu sredinu za krmaču i prasad, iako ima različitih zahteva koji se odnose na ovu kategoriju.

Cilj ovog rada je bio posmatranje ponašanja prasadi do 14 dana nakon prašenja u Eksperimentalnom centru odeljenja za stočarstvo Poljoprivrednog univerziteta Slovačke u Nitri. Očekivali smo razlike u ponašanju između grupa životinja u odnosu na telesnu masu.

U ogled je uključeno 35 grla iz pet legala. Životinje su raspoređene u dve grupe prema telesnoj masi na rođenju. U prvoj grupi su bila prasad telesne mase na rođenju do 1.35 kg; u drugoj grupi su bila prasad telesne mase od preko 1.45 kg.

Etološke opservacije su rađene u eksperimentalnom centru odmah nakon rođenja i to u dva 24-časovna posmatranja gde su registrovani aktivnosti kao što su spavanje, sisanje, kretanje. Do 14 dana starosti imali smo svakodnevne 8-časovne opservacije. Sve etološke opservacije su rađene korišćenjem kontinualnih metoda sa beleškama u vidu etograma.

Opservacije su obrađene korišćenjem MS Excel programa.

Posmatrali smo spavanje, sisanje i aktivnosti kretanja tokom etoloških opservacija. Utvrdili smo da su prasad iz prve grupe spavala duže u prva tri dana nakon rođenja. Možemo reći da su prasad prve grupe generalno spavala duže.

Prema maksimalnim i prosečnim vrednostima za svu prasad, prema telesnim masama na rođenju, prasad prve grupe je sisala relativno manje do sedmog dana starosti a zatim se sisanje povećavalo od sedmog do desetog dana.

Prema etološkim opservacijama možemo zaključiti da su se lokomotorne aktivnosti prasadi prve grupe postepeno smanjivale do četvrtog dana. Prasad se najviše kretala petog dana. U drugoj grupi, kretanje prasadi se povećavalo do drugog dana. Trećeg dana registrovan je pad prosečnog trajanja kretanja, a od četvrtog dana do devetog registrovan je blag porast lokomotorne aktivnosti.

## References

- ČEŘOVSKÝ, J., 2005. Ztráty selat do odstavu v provozních podmínkách. In: *Náš chov: Reprodukce a zdravý odchov mláďat*, roč. 65, no.5, 2005, p. P22-P25, ISSN 0027-8068
- DEBRECÉNI, O. et al., 2001. *Etológia hospodárskych zvierat*. Nitra : SPU, 2001. 41, 55, 161 – 181 p.
- ILLMAN, G., CHALOUPKOVÁ, H., PODROUŽEK, J., ŠPINKA, M., 2000. Mohou prasnice vokalizací vzájemně ovlivnit frekvenci kojení? In: *Zborník referátov z 27. etologickej konferencie ČSEtS, 4.- 6. 5. 2000, Brno- Nové Dvory*, s. 22
- ILLMAN, G., ŠPINKA, M., de JONGE, F., 2001. Vokalizace selat kolem ejectione mléka u domestikovaných prasat: je to spolehlivý indikátor kondice selat? In: *Zborník z 28. etologickej konferencie ČSEtS, 3.-5.5. 2001, Račkova Dolina*. S. 68-69
- MAGIC, D. 1996. Vplyv výživy na zdravie a rast ciciakov. In.: *Slovenský Chov*, roč. 1, 1996, č. 1, str.: 8 – 9.
- SMAZALOVÁ Z. a ILLMANOVÁ, G., 2003. Vliv ustájení na mateřské chování během porodního a časne poporodního období s ohledem na příjem mléka selaty. In: *Zborník z 30. etologickej konferencie ČSEtS, 10.-12.4.2003, Jičín*, s. 39