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UNCHARACTERISTIC BEHAVIORS OF THE PIGS AT THE FATTENING TIME

The uncharacteristic behaviors for the hogs kept in the coop covered with the straw and without were checked, allowing for the stereotypes.

Key words: hogs, behavior, stereotype

Introduction. The new pigs' conditions of existence after their domestication have caused some clear changes in the qualitative and quantitative behavior model. Looking for the fodder and taking it, took more than 30% of the time in this model, 21-34% comprised movement, and from 6% to 10% was for the relaxation. [Stolba and Wood-Gush 1989, Trojan 2007].

In this new behavior model the diversity of behavior has decreased.

The pigs limited movement activity in the exploration and burrow area. They did not look for the food and they spent from 70% to 80% of their time on the relaxation. [Kozera 2007, Ormian and Ruda 2006, Nawrocki and Winnicki 2001]. The pigs for more than 90% of their night time were resting and sleeping.

The animals behavior is recognized as the most important indicator of their welfare. In the modern breeding there is more attention paid on the behavior knowledge of the veterinary diagnostics and the improvement of efficiency of pigs breeding. [Pisula 2006, Street and Gonyou 2008, Hulsen and Scheepens 2014].

The studies of pigs behavior models more often show some uncharacteristic behaviors which appear to us with a bigger frequency and variety of forms, even when the pigs are bred in the comfortable conditions of raising. [Jezierski 2002, Kabai 2008, Latham i Mason 2008].

Among uncharacteristic behaviors of the pigs most of all are those stereotype kinds. Among lots of definitions, the stereotype kinds of behaviors very often are defined as simple, constant and repetitive forms of behavior without visible aim. Those kinds of behavior do not lead to the satisfaction of physiological needs of the body. [Broom 1986, Broom 1991, Kowalski 2005, Siergiel et al. 2012].

According to Mason and Rushen [2006], the stereotype behavior is defined as the repetitive one, caused by the frustration or central nervous system dysfunction. In other words, the stereotype behaviors are the attempts to deal with the certain situations (coping).

The opinions on the stereotypes' roles of animals are very different. According to Barnett and Hemsworth [1990] and Kowalski [2002], the stereotype behaviors are very important for the adaptable mechanism which protects body from the psychosomatic disorders.

However it can not be the base for keeping the pigs in the condition when they have to manifest some stereotypes for preserving their welfare.

According to Mason and Rushen [2006] stereotypes and their consequences are clearly regarded as the symptom of pathologie, just because they are very closely related to the different kind of indicators of welfare (health, production).

Task, the aim of the article. The aim of these researches was to examine some uncharacteristic behaviors of the pigs at the fattening time.

Material and methods. The researches which took 150 days, were carried into two local experiments among 120 different hogs (pbz x wpb). In the first experiment it were 60 hogs divided into 4 groups (one group was composed of 10 hogs and the other was composed of 20 hogs). Two groups were kept in the coop covered with the straw and the other two groups of hogs were kept in the coop with the concrete slab without any straw.

In the second experiment for the first 60 days, hogs were kept in the same way as in the first experiment, but for the rest of the days the hogs were moved into the coops without any straw and combined into two new groups. Each new group consisted on 30 hogs.

The first new group was formed by the hogs kept in the coops with the straw, and the second new group was made of the hogs kept in the coops without the straw.

The researches were carried in the constant and random way.

The continuous researches were led for 24 hours every 30 days using computer-based audiovisual equipment. The random researches were repeated 12 times and each attempt continued 5 minutes. They were done every 15 days using in-house method.

Evaluation of researches took into consideration: forms of uncharacteristic behaviors, uncharacteristic behaviors' participation during the specific time, stereotype's character, the number of hogs included some stereotypes, the period of stereotype presence during the general time for uncharacteristic behaviors.

Results of researches. From the researches which have been carried it is shown that no matter in which way the hogs were kept, they revealed some similar forms of uncharacteristic behaviors.

In the group of hogs there were observed: hogs grazing the bars of coop, biting the troughs and watering places, biting and licking the bars of coop, licking the floor, immobility, walking around with the head down, hitting the hard things, fake chewing and nervousness.

In both experiments, there were noticed some uncharacteristic behaviors that were observed in each group just from the beginning to the end of fattening time with different intensity.

According to the data in the table 1, we can see that uncharacteristic behaviors took from 0,17% to 1,46% of the time (experiment 1) and 0,16% to 0,92% (experiment 2).

Similar conclusion were drawn by Kozera [2007] and Ormian [2003].

Table 1.

The period for uncharacteristic behaviors of hogs out of the general time (%).

Group	Fattening time (24 hours)					
	1	30	60	90	120	150
I experiment						
1	0,22	0,48	0,63	0,33	0,20	0,18
2	0,31	0,74	0,96	0,42	0,31	0,25
3	0,17	0,26	1,12	0,38	0,28	0,20
4	0,40	0,85	1,46	0,80	0,54	0,37
II experiment						
1	0,18	0,31	0,42	1,16	0,54	0,35
2	0,16	0,26				
3	0,32	0,53	0,34	0,92	0,41	0,29
4	0,19	0,71				

In Kołacz and Cwynar's [2010] opinion, stereotypes from intensive pig farming occur very often and concern from 20% to 100% of animals. The time while it can be noticed takes from 7% to 75% of general time.

The researches that were carried by using in-house method, by the first experiment, show that stereotypes' behaviors took place at the first 24 hours of fattening time in each group, this concerns from 5% to 10% of animals, and increases later up to 8,12% to 26,15%.

The second experiment shows that in the 1st and 2nd group of hogs stereotypes' behaviors were noticed among 5 to 10% of animals, and it took from 18,19 % to 22,16% of the time. In the second day of fattening time, stereotypes occurred in each examined group. It concerned from 10% to 40% of hogs and the period for this was from 7,18% to 53,12% of the total time. In the further time of the fattening period, the number of stereotypes increased to 42,10%. At the end of that period this number evidently dropped. It has not been noticed that the way of hog's maintenance had a big influence on the number of stereotypes.

It should be remarked that the number of stereotypes among the hogs kept in the coop covered with the straw was lower. The factor that took some hogs' attention was the straw that kept the animals busy. It was very important for the prophylactic behavior's system [Kowalski 2005, Nowicki et al. 2008].

Statistical analysis of maintenance influence (straw, straw-less) has not show the scale for the clear number of stereotype's occurrence. More important in that case was the period of fattening time because it had a bigger and visible effect on the stereotype's occurrence.

According to Cronin et al. [1986] the animal that spend more than 30% of the time on stereotype's behaviors, they produce more heat - about 36%. At the same time these animals lose about 23% of their metabolic power. It is important factor for economical side of pigs production. The stereotypes that were considered in these researches using in-house method were aimed mainly at the environment. It was very rare to notice some kinds of auto-stereotypes, behaviors that its results were worse for animals [Sergiel et al. 2012].

Conclusions. The uncharacteristic behaviors including some stereotypes were observed from the beginning to the end of fattening time.

Stereotypes concern from 5% to 42% of hogs, and the time while it can be noticed takes from 8,12% to 88,12% of general time.

It has not been noticed that the way of hog's maintenance (with straw, straw-less) had a big influence on the number of stereotypes.

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Summary

The aim of this work was to estimate the occurrence of uncharacteristic behaviors of the pigs at the fattening time.

The researches were carried into two local experiments during 150 days.

In each experiment it were 60 hogs divided into 4 groups (one group was composed of 10 hogs and the other was composed of 20 hogs). Two groups were kept in the coop covered with the straw and the other two groups of hogs were kept in the coop with the concrete slab without any straw.

It was proved that some uncharacteristic behaviors, including stereotypes, occurred from the beginning to the end of fattening time.

The researches show that stereotypes' behaviors concern from 5% to 42% of hogs, and the period during which it was noticed took from 8,12% to 88,12 of the time

It has not been noticed that the way of hog's maintenance (with straw, straw-less) had a big influence on the number of stereotypes.