

Results Concerning the Breeding Dynamics Evolution of Piglets inside S.D.E. of UASVM Cluj-Napoca

Ionel TOADER, Ilie CORNOIU, Mirela CADAR, Anca FORGACIU, Marius SABO

University of Agricultural Sciences and Veterinary Medicine, Faculty of Animal Science and
Biotechnologies, 3-5 Manastur Street, 400372 Cluj-Napoca, Romania; tehnician_toader@yahoo.com

Abstract. In the present work paper we proposed the checking and making evident of piglet breeding dynamics derived from 3 crossbred sows, which are at the first littering, bred and maintained inside S.D.E. of UASVM Cluj-Napoca. Each piglet from the 3 lots was individually weighted at birth, at 7 days and at 21 days, following its breeding dynamics evolution and the sows' suckling capacity. There was calculated the average (\bar{X}), standard deviation (s), standard error (s_x) and variation coefficient ($V\%$) for each piglet lot at birth.

Keywords: crossbred young sows, piglets, breeding dynamics evolution

INTRODUCTION

The piglet number obtained at birth and weaned determines the meat production in pigs, that means by the biological and economical proliferation of sows.

In the present work paper we proposed the checking and making evident of piglet breeding dynamics derived from 3 crossbred sows, which are at the first littering, bred and maintained inside S.D.E. of USAMV Cluj-Napoca.

MATERIALS AND METHODS

As we mentioned, 3 piglet lots represented the biological material, which derived from 3 sows being at the first littering.

Each piglet from the 3 lots was individually weighted at birth, at 7 days and at 21 days, following its breeding dynamics evolution and the sows' suckling capacity.

The primary data were processed by consecrated statistical methods.

RESULTS AND DISCUSSION

The age of 3 young sows mounted was of 9 months, having an average weight between 100 and 105 kg. The young sows were prepared for mating in a period of 21 days.

Conventionally numbered with 1, 2 and 3 in the end of 21 days they manifested the estrus and were artificially mounted with crude seminal material derived from 3 non-related boars.

In Table 1 are presented the sows' biological proliferation that means the number of living and birth dead piglets.

Tab. 1

Biological proliferation of the 3 young sows

Young sows	Number of piglets at littering		
	Total	dead	living
Young sow 1	8	1	7
Young sow 2	14	1	13
Young sow 3	6	-	6

The biological proliferation of the 3 young sows presented in Table 1 was superior in sow 2 case (14 heads), followed by sow 1 (8 heads) and sows 3 (6 heads). We appreciate these differences to be caused by many factors such as: the inoculated seminal material quality derived from 3 different boars, the ignorance of sows' origin, dysfunctions in their feeding during breeding period. The weight and sex of each piglet at birth were presented in Table 2.

Tab. 2

Sex and weight of each piglet at birth

Crt. nb.	Young sow 1			Young sow 2			Young sow 3		
	sex	living piglet weight (g)	dead piglet weight (g)	sex	living piglet weight (g)	dead piglet weight (g)	sex	living piglet weight (g)	dead piglet weight (g)
1	♂	1800	-	♂	1100	-	♀	1500	-
2	♀	1700	-	♂	1400	-	♀	1400	-
3	♀	1600	-	♂	1500	-	♀	1400	-
4	♂	1500	-	♀	1500	-	♀	1500	-
5	♂	1900	-	♂	1300	-	♂	1100	-
6	♀	1500	-	♀	1400	-	♂	900	-
7	♀	1500	-	♀	1800	-	-	-	-
8	♂	-	2000	♂	1600	-	-	-	-
9	-	-	-	♂	1400	-	-	-	-
10	-	-	-	♀	1600	-	-	-	-
11	-	-	-	♂	1500	-	-	-	-
12	-	-	-	♀	1600	-	-	-	-
13	-	-	-	♂	1600	-	-	-	-
14	-	-	-	♀	-	1500	-	-	-
Total	-	11500	2000	-	19300	1500	-	7800	-

In Table 3 was calculated the average (\bar{X}), standard deviation (s), standard error ($s_{\bar{x}}$) and variation coefficient ($V\%$) for each piglet lot at birth.

Tab. 3

The average of piglet lots at birth

Lot	Heads (n)	$\bar{X} \pm s_{\bar{x}}$	s	V%
Lot 1	7	1.642 \pm 0.60	0.161	9.80
Lot 2	13	1.484 \pm 0.47	0.172	11.59
Lot 3	6	1.300 \pm 0.20	0.244	18.76

From the data presented in Table 3 comes out a good weight of piglets from lot 1 (1.642 \pm 0.60 kg), lot 2 (1.484 \pm 0.47 kg) and more decreased in lot 3 (1.300 \pm 0.20 kg).

At 7 days from birth the body weight of each piglet is presented in Table 4.

Tab. 4

Weight of piglet lots at 7 days from birth

Crt. nb.	Young sow 1			Young sow 2			Young sow 3		
	sex	living piglet weight (g)	dead piglets	sex	living piglet weight (g)	dead piglets	sex	living piglet weight (g)	dead piglet weight (g)
1	♂	3800	-	♂	3000	2	♀	3200	-
2	♀	3500	-	♂	2000	-	♀	3400	-
3	♀	3300	-	♂	2800	-	♀	3000	-
4	♂	2900	-	♀	3400	-	♀	3200	-
5	♂	3000	-	♂	3400	-	♂	2600	-
6	♀	3200	-	♀	3200	-	♂	1700	-
7	♀	2800	-	♀	3500	-	-	-	-
8	-	-	-	♂	2500	-	-	-	-
9	-	-	-	♀	2900	-	-	-	-
10	-	-	-	♂	3000	-	-	-	-
11	-	-	-	♀	3400	-	-	-	-
12	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-
Total	-	22500	-	-	33100	2	-	17100	-

In Table 5 are presented the average (\bar{X}) of each piglet lot, the standard deviation (s), standard error (s_x) and variation coefficient ($V\%$) for each piglet lot at 7 days from birth.

Tab. 5

Average of piglet lots at 7 days from birth

Lot	Heads (n)	$\bar{X} \pm s_x$	s	$V\%$
Lot 1	7	3.214 ± 0.13	0.35	10.88
Lot 2	11	3.009 ± 0.13	0.44	14.62
Lot 3	6	2.850 ± 0.46	1.55	14.09

The body weight evolution and the number of dead piglets at 21 days in the 3 lots are presented in Table 6.

Tab. 6

Weight of piglet lots at 21 days from birth

Crt. nb.	Young sow 1			Young sow 2			Young sow 3		
	sex	living piglet weight (g)	dead piglets	sex	living piglet weight (g)	dead piglets	sex	living piglet weight (g)	dead piglets
1	♂	6900	-	♂	4200	2	♀	6500	-
2	♀	5000	-	♂	6200	-	♀	6400	-
3	♀	6800	-	♂	5800	-	♀	5900	-
4	♂	5800	-	♀	5000	-	♀	6700	-
5	♂	6500	-	♂	4700	-	♂	5600	-
6	♀	6700	-	♀	6500	-	♂	3900	-
7	♀	5400	-	♀	6800	-	-	-	-
8	-	-	-	♂	4600	-	-	-	-
9	-	-	-	♀	6200	-	-	-	-
10	-	-	-	♂	6600	-	-	-	-
11	-	-	-	♀	6700	-	-	-	-

12	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-
Total	-	43100	-	-	63300	2	-	35000	-

The average (\bar{X}) of each piglet lot, the standard deviation (s), standard error ($s_{\bar{x}}$) and variation coefficient ($V\%$) for each piglet lot at 21 days from birth are presented in Table 7.

Tab. 7

Average of piglet lots at 21 days from birth

Lot	Heads (n)	$\bar{X} \pm s_{\bar{x}}$	s	$V\%$
Lot 1	7	6.157 ± 0.28	0.75	12.24
Lot 2	11	5.754 ± 0.28	0.95	16.54
Lot 3	6	5.833 ± 0.45	1.02	17.48

The difference of body weight of the 3 piglets' lots from birth to 21 days as well the suckling capacity of the first 2 sows are presented in Table 8. The calculus of suckling capacity in sows was done after methods cited in specialty literature, considering for 1 kg gain a quantity of 4.8 kg of milk per piglet. In lot 3 because of smaller than 7 piglets' number was not calculated the suckling capacity.

Tab. 8

Suckling capacity of sows

Lot	Weight of piglet lots at birth (kg)	Weight of piglet lots at 21 days (kg)	Weight difference (kg)	Suckling capacity (kg)
Lot 1	11.500	43.100	31.60	173.28
Lot 2	16.300	63.300	47.00	225.60
Lot 3	7.800	35.000	27.20	-

CONCLUSIONS

After the obtained results can be formulated next conclusions:

- the young sows' proliferation is referred to above presented factors;
- the average body weight of piglets from the 3 lots was closed to that one recommended by E.U. (1.4 kg at birth);
- the piglet losses' percent from birth to 21 days was reduced having in view the fact that young sows were primiparous and their accommodation was not done in maternity boxes;
- the suckling capacity is very good in lot 2, followed by lot 1 and in lot 3 was not calculated because of smaller than 7 heads' number.

REFERENCES

1. Cornoiu I. (2008). Suinele domestice creștere și valorificare, Edit. Risoprint Cluj-Napoca.
2. Dinu I. (1981), Probleme speciale de ameliorare și exploatare a suinelor, EDP, București.
3. Farkas N., T.M. Pop (1985). Tehnologia creșterii suinelor, Caiet de lucrări, practice, Tipo Agronomia, Cluj-Napoca.
4. Zeneci N. (2006). Creșterea porcilor în gospodăriile familiale, Edit. Cartea de Buzunar, București.