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## PRODUCTIVITY OF SOWS GREAT WHITE BREEDS OF DIFFERENT TYPES OF ADAPTATION \*

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*The indices of reproductive capacity of large white breeds of sows of different types of adaptation are investigated. For analysis, data from the primary zootechnical documentation and the results of their own research were used. The index "level of adaptation" and the coefficient of productivity were calculated according to methods V. S. Smirnov and T. E. Long, T. H. Short, R. O. Bates.*

*It was established that the maximum indicators of the level of adaptation (life expectancy – 32,8–77,5 months, duration of tribal use – 24,4–68,1 months, index "level of adaptation" – 6,55–8,90 points) and reproductive ability (multiplicity of 9,0–13,0 heads, weight of the nest on the date of weaning at the age of 28–35 days – 67,0–90,2 kg, duration of interbreeding period – 150–184 days) are characterized by sows of a superadaptive type.*

**Key words:** sow, life expectancy, breeding duration, reproductive ability, type of adaptation, index, productivity coefficient, correlation.

The increase in the production of pig products involves the implementation of certain measures, namely: creating optimal conditions for keeping and feeding, introducing innovative methods for assessing the breeding value of animals of different sex-age groups, and others.

In connection with the intensification of the selection process, which occurs with the use of animals of foreign origin, an important issue is the study of their level of adaptation and the implementation of genetic potential by the main quantitative features in new environmental conditions [1–3]. Scientific researches of domestic and foreign scientists testify to the relevance of this and subsequent researches [4–9].

**The purpose of the article** – to study the reproductive capacity of large white sows of various types of adaptation, to calculate the productivity factors and the level of correlation between the signs.

**Materials and methods of research.** The experimental part of the research was conducted in the conditions of a breeding reproducer for the breeding of pigs of large white breed (*Krupnaia belaiia poroda*) of LTD «Druzhba - Kaznacheivka» of Dnipropetrovsk region during 2015–2017.

For the analysis of the nature of inheritance of signs of reproductive ability of sows of different types of adaptation, data from the primary zootechnical documentation (Form 2-SV "Card of the breeding sow" and 5-SV "The journal of accounting for sows and offspring of piglets") and the results of their own research were used.

Estimation of sows of large white breed of experimental groups (I – superadaptive, II – mediumadaptive, III – minusadaptive type of adaptation) based on the level of adaptation and reproductive ability were conducted taking into account the following absolute and integrated indicators: life expectancy, months; duration of breeding use, months; index "level of adaptation, scores", farrowers received, piglets received during the period of operation of the uterus in the herd, heads; live piglets, scored; multiplicity, heads; mass of the nest on the date of weaning at the age of 28–35 days, kg; the duration of the interbreeding period, days.

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The index of "adaptation level" (1) and productivity factor (2) were calculated according to V. S. Smirnov (1) and T. E. Long, T. H. Short, R. O. Bates (2), respectively:

$$LA = \frac{LE^2}{CF \times DBU \text{ (month)}}, \quad (1)$$

where: LA – the level of adaptation, points, LE – life expectancy of the sow (from birth to the last weaning of the piglets), month; DBU – duration of breeding use (from the beginning of the first fertility to the last weaning of the piglets), month [7];

$$CP = \frac{X}{\bar{X}} \times 100, \quad (2)$$

where: CP – coefficient of performance, points; X – the individual value of the sign,  $\bar{X}$  – the average value of the attribute in the group of animals [8].

Biometric processing of the obtained research results was carried out according to the method of G. F. Lakin [9].

**Research results.** It has been established that life expectancy of sows of the main herd (n = 60) is  $44,1 \pm 1,97$  months (Cv = 35,27 %), the duration of breeding use is  $32,8 \pm 1,95$  months (Cv = 46,91 %), the adaptation index is  $11,87 \pm 0,709$  (Cv = 47,02 %). The ratio of indicators "duration of breeding use of a sow, a month" to a "life expectancy of a sow, a month" is  $71,3 \pm 1,53$  %.

During the period of breeding use, sows of large white breed receive  $6,1 \pm 0,36$  farrows (Cv = 47,11 %), piglets only per one animal of the specified production group –  $65,8 \pm 4,41$  heads (Cv = 52,80 %), live piglets –  $62,6 \pm 4,17$  heads (Cv = 52,55 %). Multiplicity of sows is  $10,1 \pm 0,20$  heads (Cv = 16,02 %); weight of the nest on the date of weaning at the age of 28–35 days –  $77,0 \pm 1,02$  kg (Cv = 10,45 %), the duration of the interbreeding period –  $175,3 \pm 3,97$  days (Cv = 17,86 %).

The number of sows of the class "elite" on the basis of "multiplicity and" mass of the nest on the date of weaning at the age of 28–35 days, kg "heads" is 26,67, the I class – 51,66, the II class – 11,67 %, extracurricular – 10,00 %.

Studies have shown that animals of the I group dominated the III age according to the "duration of pedigree use, months" by 25,7 months (td = 6,94; P < 0,001), "duration of pedigree use, month" – by 29,1 months. (td = 9,73; P < 0,001), the index "adaptation level, points" is 13,23 points (td = 6,30; P < 0,001) (Table 1).

### 1. Indexes of level of adaptation and signs of reproductive ability of sows of experimental groups

Indexes	Biometrical indexes	Group		
		I	II	III
		type of adaptation		
		superadaptive	mediaadaptive	minusadaptive
1	2	3	4	5
Duration of life, month	n	23	26	11
	$\bar{X} \pm S\bar{x}$	$54,4 \pm 2,16^{***}$	$41,9 \pm 3,09$	$28,7 \pm 3,00$
	Cv, %	19,09	37,54	34,73
Duration of the breeding use, month	$\bar{X} \pm S\bar{x}$	$44,8 \pm 2,11^{***}$	$29,6 \pm 2,73$	$15,7 \pm 2,12$
	Cv, %	22,68	47,02	44,60
Correlation DL : DBU, %	$\bar{X} \pm S\bar{x}$	$81,8 \pm 0,76$	$69,2 \pm 1,45$	$54,1 \pm 2,67$
Index "level of adaptation", points	$\bar{X} \pm S\bar{x}$	$7,80 \pm 0,162^{***}$	$11,7 \pm 0,38$	$21,03 \pm 2,099$
	Cv, %	9,95	16,69	33,40
Got farrows	$\bar{X} \pm S\bar{x}$	$8,6 \pm 0,39^{***}$	$5,3 \pm 0,42$	$2,7 \pm 0,35$
	Cv, %	22,08	40,96	43,67

Table 1 continuation

1	2	3	4	5
Got piglets total, heads	$\bar{X} \pm S\bar{x}$	96,4 ± 5,12***	56,3 ± 5,13	26,4 ± 4,46
	Cv, %	25,51	46,46	55,92
Got living piglets, heads	$\bar{X} \pm S\bar{x}$	91,5 ± 4,69***	53,8 ± 4,82	24,2 ± 4,34
	Cv, %	24,61	45,63	59,33
Polycarpousness, heads	$\bar{X} \pm S\bar{x}$	10,6 ± 0,21*	9,9 ± 0,20	8,6 ± 0,82
	Cv, %	9,93	0,33	31,75
Mass of nest is upon the date of separation in age a 28–35 twenty-four hours, kg	$\bar{X} \pm S\bar{x}$	81,2 ± 1,51**	77,2 ± 1,89	76,4 ± 1,62
	Cv, %	9,41	12,50	8,35
Amount of sows of class "elite", heads	∑	7	3	6
Amount of sows of I of class, heads	∑	12	17	2
Amount of sows of II of class, heads	∑	3	3	1
The amount of sows of class is "extracurricular", heads	∑	1	3	2
Duration between farrow period, days	$\bar{X} \pm S\bar{x}$	161,1 ± 2,28***	173,7 ± 4,41	207,3 ± 16,08
	Cv, %	6,79	12,96	25,73

Note. Comparison is conducted between groups of animals superadaptive and minusadaptive types of adaptation, \*\*\*  $P < 0,001$ , \*\*  $P < 0,01$ ; \*  $P < 0,05$ .

## 2. Coefficient of the productivity of sows of large white breed of different types of adaptation

Indexes	Biometrical indexes	Group		
		I	II	III
		type of adaptation		
		superadaptive	mediaadaptive	minusadaptive
Got farrows	n	23	26	11
	$\bar{X} \pm S\bar{x}$	139,80 ± 6,560***	87,93 ± 7,063	44,86 ± 5,905
	Cv, %	22,01	40,96	43,67
Got piglets total, heads	$\bar{X} \pm S\bar{x}$	146,40 ± 7,786***	85,54 ± 7,793	40,16 ± 6,771
	Cv, %	25,51	46,46	55,92
Got living piglets, heads	$\bar{X} \pm S\bar{x}$	146,31 ± 7,507***	86,04 ± 7,704	38,78 ± 6,931
	Cv, %	24,60	45,65	59,33
Polycarpousness, heads	$\bar{X} \pm S\bar{x}$	105,65 ± 2,188*	99,59 ± 2,017	86,00 ± 8,231
	Cv, %	9,93	10,33	31,75
Mass of nest is upon the date of separation in age a 28–35 twenty-four hours, kg	$\bar{X} \pm S\bar{x}$	100,25 ± 1,967	100,22 ± 2,457	99,14 ± 2,496
	Cv, %	9,41	12,50	8,35

Note. Comparison is conducted between groups of animals superadaptive and minusadaptive types of adaptation, \*\*\* -  $P < 0,001$ , \* -  $P < 0,05$ .

A reliable difference between the groups of animals of opposite types of adaptation (I–III) is set by the amount of got farrows (lim = 5,9; td = 11,34;  $P < 0,001$ ), piglets all (lim = 70 heads; td = 10,32;  $P < 0,001$ ), living piglets (lim = 67,3 heads; td = 10,54;  $P < 0,001$ ), polycarpousness (lim = 2,0 heads; td = 2,38;  $P < 0,05$ ), mass of nest upon the date of separation in age a 28–35 twenty-four hours (lim = 4,8 kg; td = 2,17;  $P < 0,05$ ) hours and duration of between farrow period (lim = 46,2

twenty-four hours;  $td = 2,84$ ;  $P < 0,01$ ). Maximal amount of sows of class "elite" (54,54 %) on signs "polycarpousness and "mass of nest upon the date of separation in age a 28–35 twenty-four hours, head" is educed kg" in the group of sows of minusadaptive, I to the class (65,38 %) – in the group of sows of mediaadaptive type, II of class (13,04 %) – in the group of sows of superadaptive type. The amount of sows of class is "extracurricular" hesitated in limits from 4,34 (I group) to 18,318 % (III group).

The calculations of coefficient of the productivity of sows on the basic signs of reproductive ability confirm the set conformity (table. 2). So, difference between groups superadaptive and minusadaptive types on a sign are "got farrows" presents 94,94 ( $td = 10,76$ ;  $P < 0,001$ ), piglets are "got all, heads" – 106,24 ( $td = 10,30$ ;  $P < 0,001$ ), living piglets, heads", are "got – 107,53 ( $td = 10,53$ ;  $P < 0,001$ ), "polycarpousness, heads" – 19,65 ( $td = 2,30$ ;  $P < 0,05$ ), "mass of nest upon the date of separation, kg" is 1,11 points ( $td = 0,35$ ;  $P > 0,05$ ).

A coefficient of pair correlation is an important biometrical index and widely used in zootechnic practice for the direction finding of selection-breeding work.

On results our researches the reliable coefficients of pair correlation for the animals of different types of adaptation are set after the next pairs of signs: life-span  $\times$  duration of the tribal use ( $r = +0,938 - +0,995$ ),  $\times$  it is got farrows ( $r = +0,953 - +0,975$ ),  $\times$  all piglets are got for period of exploitation of uterus in a herd ( $r = +0,893 - +0,965$ ),  $\times$  living piglets ( $r = +0,925 - +0,968$ ) are got, duration of the tribal use  $\times$  is got farrows ( $r = +0,938 - +0,956$ ),  $\times$  all piglets are got for period of exploitation of uterus in a herd ( $r = +0,813 - +0,939$ ),  $\times$  living piglets ( $r = +0,843 - +0,939$ ) (table. 3).

### 3. Coefficient of correlation is between the indexes of level of adaptation and signs of reproductive ability of sows of experimental groups

Signs	Biometrical indexes	Group		
		I	II	III
		type of adaptation		
		Superadaptive	Mediaadaptive	Minusadaptive
1	2	3	4	5
1–2	n	23	26	11
	$r \pm Sr$	$0,995 \pm 0,0218^{***}$	$0,972 \pm 0,048^{***}$	$0,938 \pm 0,1155^{***}$
	tr	45,65	20,26	8,12
1–3	$r \pm Sr$	$-0,618 \pm 0,1716^{**}$	$-0,463 \pm 0,1809^*$	$-0,275 \pm 0,3205$
	tr	3,60	2,56	0,86
1–4	$r \pm Sr$	$0,953 \pm 0,0661^{***}$	$0,975 \pm 0,0459^{***}$	$0,968 \pm 0,0837^{***}$
	tr	14,41	21,50	11,57
1–5	$r \pm Sr$	$0,920 \pm 0,0855^{***}$	$0,965 \pm 0,0535^{***}$	$0,893 \pm 0,1500^{***}$
	tr	10,76	18,03	5,95
1–6	$r \pm Sr$	$0,925 \pm 0,0829^{***}$	$0,968 \pm 0,0512^{***}$	$0,928 \pm 0,1242^{***}$
	tr	11,16	18,90	7,47
1–7	$r \pm Sr$	$0,217 \pm 0,2130$	$0,338 \pm 0,1920$	$0,319 \pm 0,3159$
	tr	1,02	1,76	1,61
1–8	$r \pm Sr$	$-0,016 \pm 0,2182$	$0,126 \pm 0,2025$	$0,390 \pm 0,3069$
	tr	0,070	0,62	1,27
1–9	$r \pm Sr$	$-0,051 \pm 0,2179$	$0,251 \pm 0,1976$	$-0,312 \pm 0,3167$
	tr	0,23	1,27	0,99
2–3	$r \pm Sr$	$-0,651 \pm 0,1656^{**}$	$-0,576 \pm 0,1669^{**}$	$-0,538 \pm 0,2810$
	tr	3,93	3,45	1,91
2–4	$r \pm Sr$	$0,956 \pm 0,0640^{***}$	$0,948 \pm 0,065^{***}$	$0,938 \pm 0,1155^{***}$
	tr	14,93	14,59	8,12
2–5	$r \pm Sr$	$0,916 \pm 0,0875^{***}$	$0,939 \pm 0,0702^{***}$	$0,813 \pm 0,1941^{***}$
	tr	10,46	13,38	4,19
2–6	$r \pm Sr$	$0,922 \pm 0,0845^{***}$	$0,939 \pm 0,0702^{***}$	$0,843 \pm 0,1793^{***}$
	tr	10,91	13,38	4,70

Table 2 continuation

1	2	3	4	5
2-7	r ± Sr	0,195 ± 0,2140	0,315 ± 0,1937	0,140 ± 0,3301
	tr	0,91	1,63	0,42
2-8	r ± Sr	-0,031 ± 0,2181	0,099 ± 0,2031	0,345 ± 0,3129
	tr	0,14	0,49	1,10
2-9	r ± Sr	-0,051 ± 0,2179	0,389 ± 0,1880*	-0,041 ± 0,3330
	tr	0,23	2,07	0,13
3-4	R ± Sr	-0,815 ± 0,1264***	-0,600 ± 0,1633**	-0,453 ± 0,2972
	tr	6,45	3,67	1,52
3-5	r ± Sr	-0,654 ± 0,1651***	-0,571 ± 0,1676**	-0,271 ± 0,3209
	tr	3,96	3,41	0,84
3-6	r ± Sr	-0,674 ± 0,1612***	-0,562 ± 0,1688**	-0,272 ± 0,3208
	tr	4,18	3,33	0,85
3-7	r ± Sr	0,151 ± 0,2157	-0,105 ± 0,2030	0,252 ± 0,3226
	tr	0,70	0,52	0,78
3-8	r ± Sr	0,097 ± 0,2172	-0,039 ± 0,2040	-0,131 ± 0,3305
	tr	0,45	0,19	0,40
3-9	r ± Sr	0,543 ± 0,1832**	-0,014 ± 0,2041	-0,310 ± 0,3169
	Tr	2,96	0,07	0,98

Note: 1 – duration of life, months; 2 – duration of the breeding use, months; 3 – index "level of adaptation", points; 4 – got farrows; 5 – got all piglets for period of exploitation of uterus in a herd, head; 6 – got living piglets, heads; 7 – polycarpousness, heads; 8 – mass of nest upon the date of separation in age a 28–35 twenty-four hours, kg; 9 – duration of between farrow period, twenty-four hours.

The amount of reliable connections between the indexes of level of adaptation and signs of reproductive ability for the sows of experimental groups hesitated in limits from 50,0 to 63,6 %.

#### Conclusions

1. It is set that the sows of superadaptive type will outweigh the persons of the same age of opposite class (minusadaptive) on the indexes of level of adaptation and signs of reproductive ability on 58,36 and 43,63 % accordingly. Part of index is "duration of the tribal use, miss" to the index "life-span, miss", for the animals of superadaptive type presents 81,8 ± 0,76 %, minusadaptive – 54,1 ± 2,67 % (lim = 27,7 %; td = 10,00; P<0,001).

2. The integrated estimation of signs of reproductive ability of sows after the coefficient of the productivity confirms the fact of advantage of sows of superadaptive type after this group of signs of animals of other types of adaptation.

3. The coefficients of pair correlation between the indexes of level of adaptation and signs of reproductive ability for the sows of different types of adaptation hesitate in limits from – 0,815 (tr = 6,45; index the "level of adaptation" × is got farrow) to +0,995 (tr = 45,05; life-span × is duration of the tribal use).

4. With the aim of acceleration of plant-breeding process and creation of high-performance herd of pigs offer in the conditions of tribal economies of region systematic to conduct the estimation of animals basic on absolute and integrated indexes. To the leading group of sows to take away animals with an index "level of adaptation" 6,55–8,90 points.

#### Використана література

1. Коваленко Н. А. Динамика биохимических показателей крови молодняка свиной крупной белой породы австрийской селекции в процессе адаптации. *Ветеринарная патология*. 2012. № 2. С. 72–75.
2. Бажов Г. М., Комлацкий В. И. Биотехнология интенсивного свиноводства. Москва: Росагропромиздат, 1989. 269 с.
3. Бажов Г. М., Бахирева Л. А. Естественная резистентность свиной разных пород. Интенсификация селекционного процесса в свиноводстве: сб. науч. тр.

- Персиановка, 1989. С. 37–41.
4. Кислинская А. И. Откормочные и мясные качества чистопородного молодняка свиной крупной белой породы венгерской селекции и их помесей в пост-адаптационный период. *Вестн. Красноярского ГАУ*. Красноярск, 2013. Вып. 10. С. 167–171.
5. Кислинская А.И., Калининченко Г.И., Шакун А.П., Тышко Н.И. Оценка естественной резистентности организма свиной крупной белой породы венгерской селекции в период адаптации. *Современные тенденции и технологические инновации в свиноводстве*: материалы XIX Междунар. науч.-практ.

- конф. (Горки, 2012 г.); Горки: БГСХА, 2012. С. 78–83.
- Neumann D. Neue Handelsklassenverordnung für Schweinehalten. Zeitschrift, 1987, Bd. 157, N 13. P. 882–886.
  - Смирнов В. С. Оценка адаптации свиноматок к интенсивному воспроизводству. *Зоотехния*. 2003. № 7. С. 22–25.
  - Long T. E., Short T. H., Bates R. O. Estimating genetic merit / NSIF Swine Genetics. 2003. Fact Sheets 8:1–4.
  - Лакин Г. Ф. Биометрия: учеб. пособ. для биологических специальностей вузов. 4-е изд., перераб. и доп. Москва: Высш. шк., 1990. 352 с. (с. 323).
  - Kyslinskaia, A. I. (2013). Fattening and meat internalss of pure breed saplingpl of pigs of large white breed of the Hungarian selection and their crossbreeds in a post-adaptation period. *Visnyk Krasnoiarського DAU* [Bulletin Krasnoyarskiy DAU], 10, 167–171. [in Russian]
  - Kyslinskaia, A. I., Kalinichenko, G. I., Shakun, A. P., Tyszko, N. I. (2012). Estimation of natural resistance of organism of pigs of large white breed of the Hungarian selection in the period of adaptation. *Sovremennyye tendentsii i tekhnologicheskyye innovatsii v svinovodstve: materialy XIX Mizhnarodnoyi naukovopraktychnoyi konferentsii* [A Modern tendencies and technological innovations in the pig breeding: materials of XIX International sieneific-practical konferentsii]. (pp. 78–83.). Gorki: BSACA, 2012. [in Russian]
  - Neumann, D. (1987). Novelty Handelsklassenverordnung to fur supports of porks D. new man. *Zandwirtschaftliche* [Zandwirtschaftliche], 157, 13, 882–886.
  - Smirnov, V. S. (2003) Assessment of adaptation of sows to intensive reproduction. *Zootehnia* [Zootehnia], 7, 22–25. [in Russian]
  - Long, T. E., Short, T. H., Bates, R. O. (2003). Estimating genetic merit / NSIF Swine Genetics. Fact Sheets 8:1–4.
  - Lakyn, G. F. (1990). *Biometriya* [Biometria] 4<sup>nd</sup> ed., rev.). Moscow: Higher school. [in Russian]

### Referenses

- Kovalenko, N. A. (2012). Dynamics of biochemical indexes of blood of sapling of pigs of large white breed of the Austrian selection in the process of adaptation. *Veterynarnaia patalogia* [Veterinary pathology]. 2012, 2, 72–75. [in Russian]
- Bazhov, G. M. (1989). *Biotekhnologiiia intensivnogo svinovodstva* [Biotechnology of the intensive pig breeding]. Moscow: Rosagropromizdat. [in Russian]
- Bazhov, G. M. (1989). *Yestestvennaya rezistentnost' sviney raznykh porod. Intensifikatsiya selektsionnogo protsessa v svinovodstve* [Natural resistance of pigs of different breeds. Intensification of plant-breeding process in the pig breeding]. 37–41. [in Russian]

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**Халак В. І. Продуктивність свиноматок великої білої породи різних типів адаптації. Зернові культури.** 2017. Т 1. № 2. С. 345–351.

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**Ключові слова:** свиноматка, тривалість життя, тривалість племінного використання, відтворювальна здатність, тип адаптації, індекс, коефіцієнт продуктивності, кореляція.

Досліджено показники відтворювальної здатності свиноматок великої білої породи різних типів адаптації. Для аналізу використовували дані первинної зоотехнічної документації та результати власних досліджень. Індекс «рівень адаптації» та коефіцієнт продуктивності розраховували за методиками В. С. Смирнова та Т. Е. Long, Т. Н. Short, Р. О. Bates.

Встановлено, що максимальними показниками рівня адаптації (тривалість життя – 32,8–77,5 міс., тривалість племінного використання – 24,4–68,1 міс., індекс «рівень адаптації» – 6,55–8,90 бала) та відтворювальної здатності (багатоплідність 9,0 –13,0 гол., маса гнізда на дату відлучення у віці 28–35 діб – 67,0–90,2 кг, тривалість міжопоросного періоду – 150–184 діб) характеризуються свиноматки суперадаптивного типу.

Коефіцієнти парної кореляції між показниками рівня адаптації та ознаками відтворювальної здатності у свиноматок різних типів адаптації коливаються у межах від -0,815 (tr = 6,45; індекс «рівень адаптації» × одержано опоросів) до +0,995 (tr = 45,05; тривалість життя × тривалість племінного використання).

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**Ключевые слова:** свиноматка, продолжительность жизни, продолжительность племінного использования, воспроизводящая способность, тип адаптации, индекс, коэффициент производительности, корреляция.

Исследованы показатели воспроизводительной способности свиноматок крупной белой

породы разных типов адаптации. Для анализа использованы данные первичной зоотехнической документации и результаты собственных исследований. Индекс «уровень адаптации» и коэффициент производительности рассчитывали по методикам В. С. Смирнова и Т. Е. Long, Т. Н. Short, R. O. Bates.

Установлено, что максимальными показателями уровня адаптации (продолжительность жизни – 32,8–77,5 мес., продолжительность племенного использования – 24,468,1 мес., индекс «уровень адаптации» – 6,55–8,90 бала) и воспроизводительной способности (многоплодие 9,0–13,0 гол., масса гнезда на дату отлучки в возрасте 28–35 суток – 67,0–90,2 кг, продолжительность межопоросного периода – 150–184 суток) характеризуются свиноматки суперадаптивного типа.

Коэффициенты парной корреляции между показателями уровня адаптации и признаками воспроизводительной способности в свиноматок разных типов адаптации колеблются в пределах от -0,815 ( $t_r = 6,45$ , индекс «уровень адаптации»  $\times$  получено опоросов) до +0,995 ( $t_r = 45,05$ , продолжительность жизни  $\times$  продолжительность племенного использования).