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RESULTS OVER OF RESEARCH OF REPRODUCTIVE INTERNALSS OF MALEHOGS OF BREED OF LANDRAS OF DIFFERENT GENOTYPES ARE BROUGHTON TWO SUCCESSIVE GENERATIONS

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It is set that male hogs of the second generation of the English selection, after quality and quantitative the indexes of sperm for certain prevailed above the male hogs of first generation, and the male hogs of other genotypes on all investigated indexes had intermediate position. On the level of index of multifetation of coupled sows male hogs of line of Pasta of the second generation the best of all show done self in of pure breed combinations with sows, this index arrived at a mark 12 heads at the high level of impregnating ability.

Boars, sperm, generations, estimation of reproductive internals, Landras strains.

In connection with the implementation of priority national projects in agriculture, special attention is paid to the development of pig production as the most precocious field that allows you to get the most quality products at the lowest cost of production. The increase in pork production and increased profitability of the industry largely depends on the organization herd reproduction, the process of restoring or increasing the number of pigs. The high rate of reproductive ability of

pigs is an important element of management, ensuring efficient operation of the economy and getting profitable products.

The aim - to assess the reproductive properties boars Landrace breeds of different genotypes for two successive generations.

Materials and methods. The study was conducted in a herd of pigs Landrace breeds farm of "Ahroservis LTD" Kharkiv region. Studies have been conducted 12 major sperm quality boars Landrace breed sires and 12 boars of this breed, their offspring domestic, French and English selection. Sperm received manipulative way. Each month boar semen examined and evaluated by survival, volume of ejaculate, mobility, concentration, total number of sperm in the ejaculate, in accordance with the requirements of the current Instructions for artificial insemination of pigs (2003) [1].

Freshly obtained sperm diluted foreign solution "Androstar" in 1: 1-1: 5 so that the content of spermatozoa with rectilinear reciprocating movement in one sample was in the range of 40-50 million / cc. Sparse semen of boars kept at a temperature of 17 ° C in an incubator, the complete cessation of movement of sperm. Indicator absolute viability sperm boars determined by the formula V.K. Milovanov [2].

Assessment of reproduction features conducted in accordance with the instructions appraisal pigs (2003) [3].

Results. Since the time of testing were examined ejaculates from 12 boars-sires of different genotypes (domestic, French and English selection) this breed. As seen from the data (Table. 1), all boars produce a full ejaculate, semen quality and meets all the minimum requirements of the existing instructions on AI.

Studies indicate that the average survival rate of absolute boar semen of domestic selection for temperature +17 ° C was - 708 conditions. SGL, the same indicator boars French selection had - 744 conditions. SGL and 4 boars English selection - respectively - 672; 684; 756 and 720 conditions.

1. Evaluation of semen quality breeds Landrace boars different selection, (n = 12)

genotype boars	number ejaculates, pieces	indicator absolute survival, (Sa-conditions. Units)	mobility sperm,%	volume sperm, sm³	concentration-radio million / sm³	number spermatozoa in the ejaculate, billion / sm³
French Volokh	12	744,2± 7,99	89	522,5± 13,14	120,4± 6,32	62,9± 1,32
World Ikaros	12	708,0± 10,34	87	251,2± 13,79	136,9± 8,01	34,3± 1,29
English Duka	12	672,3± 19,09	86	250,4± 13,77	105,4± 1,44	26,3± 0,72
Enorma 04646	12	684,1± 13,82	87	163,1± 5,27	194,7± 8,36	31,6± 1,02
Pasta	12	756,5± 12,68	97	229,1± 11,82	143,2± 6,86	32,9± 0,92
Enorma 05089	12	720,0± 10,52	97	205,0± 11,43	105,8± 1,35	21,5± 0,47

When assessing the quality of semen found that the mobility of sperm (9-10 points) dominated boars British breeding boars 8% French and 10% of the national breeding boars.

What concerns the volume of ejaculate, the maximum (522 sm³) index were grunts French selection, in which he was a 272 sm³ or 48% more than the national breeding boars and the 359 cc or 31.2% more than in English breeding boars.

The best indicator of sperm concentration for the research period was observed in male pigs of English selection, which compared to others of the same breeding boars were more than 89 million / sm³ or 54.1%, and domestic boars and French selection - by 58 million / sm³ , 73 million / sm³, and 30 and 37.7%.

The greatest number of sperm in the ejaculate was observed in the French breeding boars, which is associated with a significant volume of ejaculate. A small amount of sperm in the ejaculate observed in 2 boars English selection that 41.6 and 36.9 million / cc sperm less than boars French selection.

The analysis found different ejaculates boars-sires studied genotypes. Research has established that quantitative and qualitative indicators of semen boars French selection had the highest volume of ejaculate and the number of sperm among boars. Highest quality indicators of sperm (levels of absolute survival, motility and concentration) were grunts of English breeding boars and domestic selection for all parameters were intermediate.

To assess the quality of reproductive boars main lines in Landrace breed was conducted insemination of pigs of the same breed.

2. Indicators many fertility sows paired with boars - main lines sires

Main line boars	Total paired, heads	Number of litters, heads	Many fertility свиней, heads
Volokh	153	139	11,6±0,12
Icaros	59	39	10,6±0,16
Enorm 04646	50	38	10,0±0,16
Pasta	27	20	11,7±0,23
Enorm 5089	35	20	10,5±0,23
Duc	41	18	11,05±0,21

Studies indicate that the level of many fertility rate paired sows boars line Pasta proved best in combination with purebred sows, the figure was 11.6 heads at the secondary level fertilizing ability boars - 74.1%, or 20 litters of 27 fertilized. The second highest reproductive properties are grunts line Volokh, which figure in many fertility them paired females was 11.6 heads at high fertilizing ability boars - 90.8%. The worst indicators for reproductive traits were grunts line Enorma 04646, figure many fertility sows that childbirth, averaged 10.0 goals in 38 litters with an average level of 76% fertilizing ability.

Further studies (Table. 3), were aimed at studying sperm 12 major boars Landrace breed sires and 12 different breeding boars and their descendants.

3. Evaluation of semen quality breeds Landrace boars in two successive generations, n = 24

genotype boars	number ejaculates, pieces	indicator absolute survival, (Sa-conditions. Units)	mobility sperm,%	volume sperm, sm^3	concentration-radio million / sm^3	number spermatozoa in the ejaculate, billion / sm^3
Volokh, French selection	I	744,2 ± 7,99	89	522,5± 31,14	120,4± 6,32	62,9± 1,32
	II	732,5± 13,94	95	324,0± 13,97 ***	160,5±96, 47 ***	52,0± 1,10 ***
Ikarosa, domestic selection	I	708,0± 10,34	87	251,2± 13,79	136,9± 8,01	34,3± 1,39
	II	696,0± 9,46	86	254,0±15, 64	139,0± 7,63	35,3± 0,93
Duca, English selection	I	672,3± 19,09	86	250,4± 13,77	105,4± 1,44	26,3± 0,72
	II	684,0± 13,82	89	260,4±14, 07	116,2± 5,58	30,2± 0,76 **
Enorma 04646, English selection	I	684,1± 13,82	87	163,1± 5,27	194,7± 8,36	31,6± 1,02
	II	692,0± 11,09	89	182,9± 8,74	157,0± 6,21 **	28,7± 0,91 *

Pasta, English selection	I	756,5± 12,68	97	229,1± 11,82	143,9± 6,86	32,9± 0,92
	II	746,0± 10,31	97	243,0± 12,62	153,0± 4,95	37,1± 0,25 ***
Enorma 05 089, English selection	I	720,0± 10,52	97	205,0± 11,43	105,8± 1,35	21,5± 0,47
	II	732,8± 9,79	97	209,0± 8,28	105,4± 0,96	22,0± 0,34

Note. * - P> 0.95, ** - P> 0.99, *** - P> 0.999 - probable difference between two successive generations boars.

Studies indicate that the difference in terms of absolute survival between boars line Volokh French selection of first and second generation is 11.7 Conditions or 1.6% for hogs older generation.

The difference for the same indicator in line boars Ikarosa domestic breeding conditions is 12.0 or 1.7% and for the first generation boars.

Analysis of absolute survival rate of sperm between two generations boars line Duca English selection index showed increase by 11.7 Conditions from boars in the second compared to the first generation of 1.7%.

In line Enorma 04646 British breeding survival rates were higher in boars second generation 8.0 conditions. ADU or 1.1% compared to the first.

Boars line Pasta English selection as the first generation had a survival rate of 10.5 absolute terms. ODN or higher than 1.4% of the second generation boars.

In line Enorma 05,089 English breeding boars second generation had the highest rate at 12.8 Conditions. OND or 1.8% compared to the first generation.

It is estimated that the absolute survival rate of sperm in all major lines of boars in two successive generations had no significant difference.

The results of the analysis in terms of sperm motility between two generations boars found that grunts line Volokh French, English Duka Enorma 04646 and the second generation are improvers on this indicator, compared with parents.

The difference in volume between the generations boar sperm French selection line Volokh was 198.5 sm^3 and sperm was significantly higher (P> 0.999), representing 37.9% in the first generation boars.

By this measure the difference in the volume of semen was minimal in line boars Ikarosa home selection, ie 2.8 sm³ or 1.1% less semen of boars in the second generation.

In line boars Duca English selection difference in volume was 10 cc semen and boars was higher in the second generation at 3.99%.

In boars second generation line Enorma 04646 English selection semen volume exceeded the performance of the first generation boars at 19.8 sm³ and 12.1% for the indicators and the probability was at trends td = 1,93.

In terms of boars sperm English selection line Pasta prevailing at 13.9 sm³ and 6% over the first generation boars.

The difference in volume of semen in boars line Enorma 05,089 English selection was small and was 4 sm³ or 1.9% for hogs second generation.

Studies indicate that the volume of semen boars difference between the first and second generations had no significant difference, except boars line Volokh French selection (P> 0.999).

In terms of the concentration of spermatozoa of boars lines Volokh French selection significantly (P> 0.999) higher concentration was in boars second generation by 40.1 million / sm³ or 33.3% compared to the first generation boars.

In line boars Ikarosa home selection difference in this indicator was 1.5% and was 2.1 million / cc higher for second generation boars.

The concentration of spermatozoa in boar second generation line Duca English selection was higher by 10.2% or 10.8 million / cc than their parents.

In other first generation boars English selection, including line Enorma 04646, sperm concentration ratio was significantly higher (P> 0.999) 37.7 million / sm³ or 24.0% than in boars second generation.

By concentration of spermatozoa in the ejaculate exceeded boars second generation 9.1 million / sm³ or 6.3% of the first generation boars line Pasta English selection.

In two successive generations Enorma 05 089 lines of the same breeding sperm concentration was almost the same, the difference was 0.4%.

Boars line Volokh French selection of the first generation had 10.9 million / sm³ or 21.0% more than the number of sperm in the ejaculate compared to second generation boars (P> 0.999).

In line boars Ikarosa domestic selection of the second generation, the figure was 1 billion or 2.9% more than in the first generation boars.

Research in quantitative terms in line boars Duca English selection showed the best boars differences in the second generation. Significantly (P> 0.999) prevailed in 14.8% of the first generation boars.

Boars line Enorma 04646 English selection of the first generation, which significantly (P> 0.95) for the studied parameters exaggerated to 2.9 billion sperm or 10.1% of second-generation boars.

In the second generation line boars Pasta English selection indicator of the number of sperm in the ejaculate was significantly (P> 0.999) higher by 4.2 billion sperm or 12.8% compared to the first generation boars.

Boars second generation line Enorma 05,089 English selection on the same indicator dominated the first generation boars at 0.5 billion sperm or 2.3%.

Thus, studying tai quantitative quality indicators in the Landrace breed boars in two successive generations showed high significantly (P> 0.999) difference between boars line Volokh French selection on the following parameters: volume, concentration, number of sperm in the ejaculate. In other boars significantly (P> 0.99) difference was observed for the concentration of sperm in line boars Enorma 04646 and by the number of sperm in the ejaculate of boars lines Duca, Enorma 04646 Pasta and English selection (P> 0.95, P> 0.99 ; P> 0.999).

Research has established that quantitative and qualitative indicators of semen breeding boars French had the highest volume of ejaculate and sperm in the ejaculate number of other boars. Highest quality indicators of sperm (indicator of absolute survival, motility and concentration) were grunts of English breeding boars and domestic selection in all criteria occupied an intermediate position.

After analyzing quantitative and qualitative indicators obtained ejaculates study was conducted to assess the quality of reproductive sows, boars paired with (tab. 4).

4. Indicators many fertility of sows, boars paired with - main lines sires and their descendants

Main line boars	Generation boars	Total paired, heads	Number of childbirth heads	Many fertility pigs heads (M ± m)
Volokh, French selection	I	153	139	11,6±0,12
	II	12	10	11,5±0,27
Ikarosa, domestic selection	I	59	39	10,6±0,16
	II	8	8	10,7±0,37
Duca, English selection	I	41	18	11,05±0,21
	II	43	38	10,9±0,21 **
Enorma 04646, English selection	I	50	38	10,0±0,16
	II	15	15	10,7±0,30 *
Pasta, English selection	I	27	20	11,7±0,23
	II	6	6	12,0±0,45
Enorma 05 089, English selection	I	35	20	10,5±0,23
	II	12	11	10,4±0,25

Note. * - P> 0.95, ** - P> 0.99 - the difference is likely on many indicators of fertility of sows, boars paired with basic lines and their descendants.

In studies established that the level of many fertility rate paired sows boars Pasta line of the second generation the best reputation in the pure breeding of mating with sows, this figure reached 12 goals mark at high fertilizing ability boars. Compared to the first generation boars difference in this indicator was 2.6% for the second generation boars. The second highest reproductive properties are grunts line Volokh first generation, they figure they many fertility paired females was 11.6 head, which was 1.3% higher than that of their descendants, and the level fertilize capacity was higher by 7.5% compared to the second generation boars. The worst in terms of reproductive traits in the first generation were grunts line Enorma 04646, figure many fertility sows that childbirth, averaged 10.0 goals in 38 litters with an average level of

76% fertilize ability, but their descendants were improvers of the line, so they many fertility rate was 10.7 head (P> 0.95), and the ability fertilize was absolute.

Conclusions

1. It is established that quantitative and qualitative indicators of semen breeding boars French had the highest volume of ejaculate (522.5 sm³) and the number of sperm (62.9 billion / sm³) among boars. Highest quality indicators of sperm: absolute survival rate (756.5 conditions unit), mobility (97%) and concentration (194.7 million / sm³) were grunts of English breeding boars and domestic selection in all the studied parameters were intermediate.

2. It is established that the grunts of the second generation of English selection, qualitative and quantitative indicators of sperm probably dominated the first generation boars, boars and other genotypes in all studied parameters were intermediate.

3. The level indicator many fertility paired sows boars Pasta line of the second generation proved best in combination with purebred sows, the figure was 12 goals at 100% capacity level fertilize boars.

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