

The Influence of Nonius Variety Amelioration with P.S.E. on Animals Productive Capacity

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Abstract

In the view of controlling the energetic capacity of the horse is necessary the constitutive elements measurement: force, speed and resistance. In the state studs starting with year 1920 were been applied different tests named qualification tests. The obtained media at qualification tests reported to actually applied performances notation system situate the youth hybrid in very well success category and Nonius youth to well success category. This fact emphasized a good management of training program and a good amelioration in the way of speed increasing.

Keywords: Nonius, gallop, saddle, hybrid, trap.

1. Introduction

In the view of controlling the energetic capacity of the horse is necessary the constitutive elements measurement: force, speed and resistance. In the state studs starting with year 1920 were been applied different tests named qualification tests.

For Nonius variety were changed along the years these tests. First the gallop test was made on 3000 meters, with 3-4 years aged horses, a rider and trapping of 60-70 kg weight. The selection was made in correlation with horse abilities. The test of easy trap in pair rigs on 20-21 km, with a transported weight of 400-500 kg. In our days the Nonius variety is qualified at four years through mixed tests of easy traction and riding.

2. Materials and methods

The productive capacity of Nonius was performed in Izvin stud, from Timiș district. In spring is made trap speed test and resistance on 15 km

distance in two at rig, with a weight of 500 kg and a traction force of 20 kg. In summer is sustaining the gallop test on 2400 m with 65 kg in saddle. The heavy traction test, in tread was took out from qualification tests because is not correspond with amelioration way of this variety. Data regarding the stallions and mares were been extracted from stud genealogic register and those of youth horses qualified in the last five years, from protocols kept in stud archive. The absolute values were been statistical calculated and showed in tables, in comparison with the both groups of Nonius horses without foreign blood and Nonius x P.S.E. over 25%.

3. Results and discussion

After all tests analysis was been observed: the massiveness and corpulence of Nonius horse is correlated direct and favorable with his energetic possibilities in trap and resistance tests and have a negative influence on the gallop tests. Data regarding the obtained performances in reproductive stallions in 1977-2001 period emphasized that both records and groups indexes

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mean are favorable for hybrid (mean on 20 km trot Nonius 59'06", Hybrid 55'11"). The hybrid has a bigger uniformity concerning the energetic capacity, variability of speed indexes being smaller. The mean speed on km in speed trap test on 20 km distance in Nonius stallions is 2'57"/ km and in the case of hybrids 2'45"/km, while in the same period and the same distance the hybrids speed didn't exceeded 2'27" /km [1, 2].

The results regarding gallop tests with 70 kg obtained by mother mares in 1977-2001 period emphasized that, although the hybrid has in pedigree one parent from a speed breed, the differences are enough modest (2'17"/2400 m for a hybrid in comparison with 3'25") and these because at that time the qualification tests weren't obligatory for all horses, but only for individuals with facilities. In Nonius variety there are individuals who without much P.S.E. have obvious abilities for riding. In the case of these two groups of mares the limits of variability indexes are not different accidentally but the real variability is more obvious around hybrid mean. From these indexes is observed that Nonius has ability for trap speed good enough concerning with his amelioration way. [3, 4] The same qualities became evident following table 3 where are synthetic presented the obtained performances in mother mares in 1977-2001 period at speed trap test and resistance at 20 km with 450 kg in cart. The indexes mean on groups easy incline in the favor of Nonius without big disparities

(58'35"/course for Nonius, 59'02"/course for hybrid, 2'55"/km for Nonius and 2'57"/km for hybrid). Table 4 shows the speed records and variability indexes in youth Nonius stallions and mares, 3-4 aged in comparison with his hybrids with P.S.E., in 1977-2001 period in speed trap and resistance tests. It is observed that although the test record is obtained by a pair of Nonius rig, the mean value of indexes is favorable for hybrids. Generally can be affirm that Nonius is a better trotter than his hybrids with P.S.E. but vitality and temperament gain make these horses to be more training and fitted in Izvin, became more resistant and with better results in tests. It seems that difference may be attributed to training less to individual abilities. Table 4 contains a synthesis of youth main indexes and their variability from the same period, at gallop test on 2400 m with 65-70 kg in saddle. In this test the breed used for amelioration favorable influenced the productivity indexes, being in average with 0'7" bigger than Nonius on course distance and on the km with 0'2" bigger than Nonius. At trap resistance and speed tests the variability is smaller than Nonius and course mean is 42'0" in comparison with 42'3" (on km 2'48"; 2'5"). Contrariwise, the obtained results by hybrids in recent qualifications are a little different (+0'3" in average) by obtained results by last years qualified hybrids.

Table 1. Performances obtained at reproductive stallions – NONIUS on 20 km trot test (resistance and easy traction – 500 kg) in 1977-2001 period

Competitor groups	No. of guys 1 head	Medium age (year) 25 heads	Distance km	Record		Indices variability		Indices mean	
				3 heads	4 heads	5 heads	6 heads	7 heads	8 head
				On lap	On km	On lap	On km	On lap	On km
NONIUS	13	6,3	20	51'14"	2'34"	51'14"- 65'23"	2'34"-3'16"	59'06"	2'57"
HIBRIDS with P.S.E.	4	5,2	20	48'40"	2'26"	48'40"- 58'37"	2'26"-2'55"	55*11"	2'45"

Table 2. Results obtained by the mother mares on 2400 m gallop test with 70 kg in saddle in 1977-2001 period

Competitor groups	No. of guys 1 head	Medium age (year) 25 heads	Distance km	Record		Indices variability		Indices mean	
				3 heads	4 heads	5 heads	6 heads	7 heads	8 head
				On lap	On km	On lap	On km	On lap	On km
NONIUS	12	3-4	2400	2'54"	1'13"	2'54"-3'60"	1'13"-1'30"	3'25"	1'55"
HIBRIDS with over 25% P.S.E.	9	3-4	2400	2'54"	1'13"	2'54"-3'48"	1'13"-r27	3'17"	2'22"

Table 3. Results obtained by the mother mares on easy traction and resistance test on 20km with 450 kg in 1977-2001 period

Competitor groups	No. of guys 1 head	Medium age (year) 25 heads	Distance km	Record		Indices variability		Indices mean	
				3 heads	4 heads	5 heads	6 heads	7 heads	8 head
				On lap	On km	On lap	On km	On lap	On km
NONIUS	24	4	20	48'46"*	2'26"	48'46"-66'44"	2'26"-3'22"	58'35"	2'55"
HIBRIDS with P.S.E.	11	3-4	20	53'05"	2'49"	53'05"-66'41"	2'49"-3'22"	59'02"	2'57"

* This is the record on variety until present on this test

Table 4. Speed and indices variability records on NONIUS youth of 3-4 years compared with NONIUS hybrids with over 25% P.S.E. on trot, speed and resistance test in 1977-2001 period

Competitor groups	No. of guys 1 head	Medium age (year) 25 heads	Distance km	Record		Indices variability		Indices mean	
				3 heads	4 heads	5 heads	6 heads	7 heads	8 head
				On lap	On km	On lap	On km	On lap	On km
NONIUS	56	15	4	39'42"	2'38"	39'42"- 51T	2'38"-3'24"	43'15"	2'54"
HIBRIDS with over 25% P.S.E	16	15	3-4	40'54"	2'43"	40'54"-48'51"	2'43"-3'15	42'6"	2'48"

Table 5. Speed and indices variability records on NONIUS youth of 3-4 years compared with NONIUS with infusion of over 25% P.S.E. on gallop test – 2400m in 1977-2001 period

Competitor groups	No. of guys 1 head	Mediu m age (year) 25 heads	Distance km	Record		Indices variability		Indices mean	
				3 heads	4 heads	5 heads	6 heads	7 heads	8 head
				On lap	On km	On lap	On km	On lap	On km
NONIUS	48	4	2400	2'59"*	1'14"1/10	2'59"-3'28"	1'14"1/10-1'26"	3'11"	1'18"1/10
HIBRIDS with 25% P.S.E	19	3-4	2400	2'46"	1'11"	2'46"-3'14"	1'11"-1'21"	3'04"	1'16"

Table 6. Speed and indices variability records on easy traction, speed and resistance on trot test on 15 km, in team, two on dog cart with 450 kg obtained by the youth equine qualified in the period 1977-2001

Competitor groups	No. of guys 1 head	Medium age (year) 25 heads	Distance km	Record		Indices variability		Indices mean	
				3 heads	4 heads	5 heads	6 heads	7 heads	8 head
				On lap	On km	On lap	On km	On lap	On km
NONIUS	26	4	15	40'26''*	2'41''	40'26''-	2'41''-	42'0''	2'48''
HIBRIDS with 25% P.S.E	4	3-4	15	41'35''	2'46''	41'35''-43'27''	2'46''-2'53''	42'30''	2'50''

Table 7. Speed and indices variability indices records on gallop test with 70 kg in saddle on 2400 m at the qualified youth in period 1977-2001

Competitor groups	No. of guys 1 head	Medium age (year) 25 heads	Distance km	Record		Indices variability		Indices mean	
				3 heads	4 heads	5 heads	6 heads	7 heads	8 head
				On lap	On km	On lap	On km	On lap	On km
NONIUS	8	4	2400	3'00''*	1'15''	3'00''-3'07''	1'15''-1'18''	3'4''	1'16" 1"8/10
HIBRIDS with 25% P.S.E	4	3-4	2400	2'58''	1'14''	2'58''-3'05''	1'15''-1'17''	3'2''	1'14"5'79

4. Conclusions

The obtained media at qualification tests reported to actually applied performances notation system situate the youth hybrid in very well success category and Nonius youth to well success category. This fact emphasized a good management of training program and a good amelioration in the way of speed increasing.

The hybrids with P.S.E. always have in Izvin stud an augmented attention in training program in the way of individuals for riding team. The gallop test values are closed because in Izvin stud are used for this test only Nonius with evident riding abilities, the others being used for speed and trap resistance on 15 km, although the both tests are obligatory.

References

1. Tapalaga I., Echitate si sporturi hipice, Ed. Mirton Timisoara, 2003
2. Tapalaga I., Caii, Editura Agroprint Timisoara, 2008
3. Tapalaga I., Lungulescu G., Tehnologia cresterii cabalinelor, Ed. Mirton Timisoara, 2004
4. Marginean G. E., Tratat de hipologie, vol. I, Ed. Orion, Bucuresti. 1997