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HISTORY AND DYNAMICS IN THE DEVELOPMENT OF FAMILIES IN THE THOROUGHBRED HORSE POPULATION IN BULGARIA. EFFECT OF MARES IMPORTED FROM RUSSIA

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ABSTRACT

The pedigrees of 57 Thoroughbred mares imported from Russia were studied. Fifteen of them become originators of families. The development of these families is extremely dynamic for the researched period covered by the overall development of the Thoroughbred population in Bulgaria, reaching the 4th - 5th generation. Families of mares imported from Russia have a vital role in the development of the Thoroughbred horse population in our country. Their importance consists mostly in elite stallions and mares belonging to the first ten families, "Derby" and "Oaks" awards winners.

Key words: breeding, thoroughbred, family structure.

The Thoroughbred horse population is formed by the import of stallions and mares from the former USSR in 1953. At later stages import from Poland and Romania followed on the basis of which the dynamic development of the population as a whole began.

First analysis of the Thoroughbred horses was made by Bruce Lowe. He numbered the families on the basis of winners of three classical prizes descending from them. Thus, family No. 1 has the greatest number of winners and their total number is 43. Lowe found out that 9 of them appear many times in the pedigrees of the best racing horses. His work was published in 1895 after his death. Similar was the work of Herman Goos, who published in 1885 detailed tables with pedigree of racing horses and he added 7 more families so that their total number became 50.

Bobinski and Zamoyski(1953) (1) summarized the families world-wide. They found that some of the families classified by Lowe have the

*Correspondence to: Associate professor Georgi Barzev, PhD, Faculty of Agriculture, Trakia University, 6000 Stara Zagora, Student Campus, Bulgaria same grandparents and hence they combined them. At the same time they added new families which represented their global significance for the development of the Thoroughbred horse. Thus the total number of families became 74, and afterwards ones originating from the USA, Australia and Poland have also been added.

Canningham et al (2001) (2) analyzed the pedigrees of horses included in volume I of the General Stud Book and he found out that 30 basic mares contributed for the development of 94% of the families that exist today worldwide.

In 1989 Bochkarev (3) described in detail the families of the Thoroughbred horse in the former USSR. In his introduction he analyzed from a historical point of view the significance of families from that breed on a world-wide scale. In that aspect he reported that mares originators of families – Old Morocco Mare, Penelope and Pocahontas are equal in significance to the originating stallions – Eclipse, Herod and Matchem.

In general, the significance and role of families in horse-breeding have been the object of

research of many authors. Mellissen and Remijuse (2003) (4)regarded families from the Holsteiner horse population as constant factors in the breeding process and the lines as existing due to the families.

Schridde (2000) (5) gives great importance to the family groups in Holstainer horse breed. He described in details the development and status of the families, and shows the significance of the elite stallions, born by broodmares belonging to the appropriate families.

The family structure of reared cultural horse breeds in Bulgaria has been analyzed in detail by a number of authors, about the Danube breed - Karaivanov 1963 (6), 1975, Karaivanov et al. 1989 (7); about the East Bulgarian breed – Dobrev 1967 (8), Dobrev and Barzev 1986 (9); about the Pleven breed – Tzankov (1989) (10); about the Arab breed – Karaivanov et al. 1967 (11).

The Thoroughbred population in our country has been acknowledged as such and approved in ISBC in 2005 and currently the publication of volume II of Bulgarian Stud Book is forthcoming. With regard to that we set the aim to study historically the formation of families and the effect of mares imported from Russia. The study covers the period 1953 – 2009 and comprises all mares included in volume I of the Bulgarian Thoroughbred Stud Book (12).

MATERIALS AND METHODS

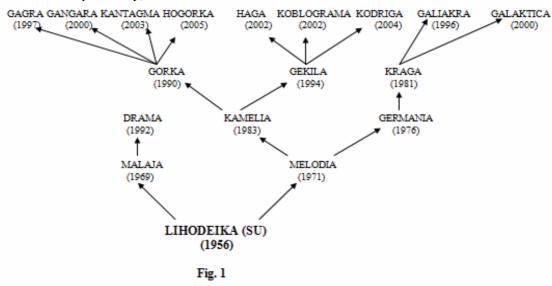
For the development of the set tasks, we used records of Studs: "Kabiuk" "Klementina", "Stefan Karadzha" newly created private farms, and the database of National association of horse breeding, stud documents and Annual registers of the stud farms (1953 – 2009) (13) and Volume I of the Bulgarian Thoroughbred Stud Book. The survey was conducted personally, in which we

used routine zootechnical methods of observation and analysis.

RESULTS AND DISCUSSION

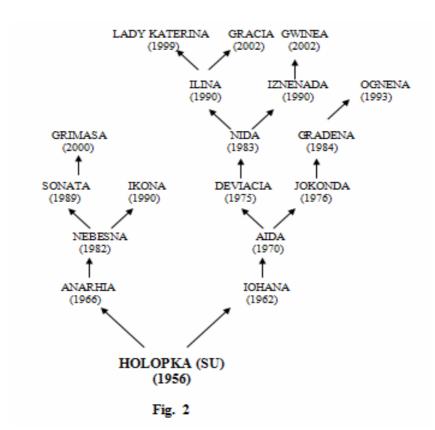
The Thoroughbred horse population in Russia has influenced strongly that in our country. A total of 57 mares have been imported, 15 of which became originators of families. These are Lihodeika, Holopka, Astilba, Ganglia 2, Didona, Gloksinja, Gotovalnya, Geografia, Ellada, Georgina 5, Gidria, Rita and Asia. The mares from the first 10 families played an extremely important role in the forming of the Thoroughbred population in our country.

Lihodeyka started to be used for breeding purposes in 1960. In Kabiyuk Horse Stud Lihodeyka is from the stallion Hrustal born in Hungary from the branch of Bend Or, descendent of Eclipse. Lihodeika's mother – Ligia also leads to Eclipse on her father's side, through Dark Ronald. Rather late in her breeding activity, two of her daughters - Malaja and Melodia, both from Makar, were included in main herd. The effect of Malaja in the family formation is insignificant. Melodia, through her daughters -Kamelia and Germania, is the main continuer through which the family has been developing to the present moment. Kamelia also has two daughters - Gorka and Gekila, whose daughters Gagra, Gangara, Kantagma, Hogorka, Haga, Koblograma, Kodriga, Galiakra and Galaktica (Fig. 1) are currently in active breeding. The mares included in the main herd with significance for the development of the family are 17 altogether, of which 9 are in range five. That family has produced 4 mares winners of the "Oaks" prize - Melodia 1974, Groteska 1992, Galiakra 1999 and Gangra 2003. The "Derby" prize in 1974 was won by Melodia, and in 1999 by Golden Gate.



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The second originator of a family is Holopka. It was imported in Bulgaria in 1960 as well and included in the main herd of Stefan Karadzha Stud . It is a descendant from Bogatir and Hrabraya. Bogatir stallion is from the Sun Star line and through Blacklock it leads to Eclipse. From that family Nadezhda mare, daughter of Jokonda, won an Oaks prize in 1981, Britanik stallion from Ilina who won "Derby" in 2003 has been included in the catalogue for producer stallions. The two daughters of Holopka – Iohana and Anarhia are her descendants. Through Iohana the family has developed rather intensively and reached to seventh generation. Actually the family has had more intensive development after 1970 from Aida mare and her two daughters Deviacia and Jokonda. Along the Jokonda branch the last mare Ognena has not left any daughters. Extremely well develops the branch of Deviacia in which through her granddaughters Ilina and Iznenada, nowadays three mares are in breeding – Lady Katerina, Gracia and Gwinea. From Holopka's second daughter - Anarhia, the family descends to fourth generation. From that family a total of 17 mares have been used for breeding, of which 6 are currently used as a brood mares – Ikona, Grimasa, Ilina, Gracia, Iznenada and Gwinea. (Fig. 2)

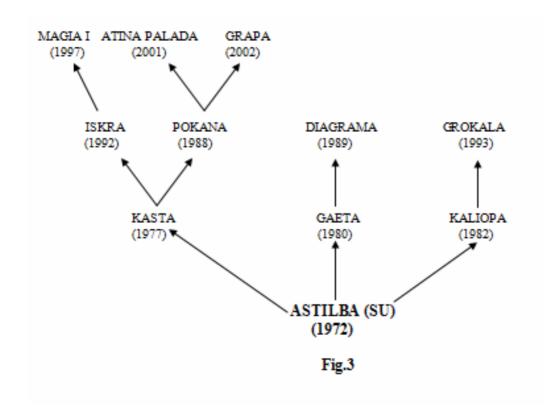


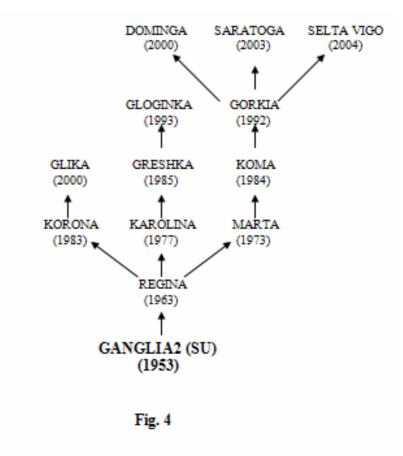
Astilba is a mare that has been imported at a later stage. It was born in 1972 and included for breeding at Istar Stud Farm after its arrival in Bulgaria in 1975. Her father Skarb is from the St. Simon line and her mother Alfa is the daughter of the famous stallion Faktotum of the Bend Or line. Her family develops through her three daughters – Kasta, Gaeta and Kaliopa. In fact Gaeta and Kaliopa continue the family up to fourth generation. Currently representatives of the lines Magia I, Atina Palada and Grapa (Fig. 3).

One of the well developing families is that of Ganglia 2 (Fig. 4). She was born in 1953 and belongs to the group of the first mares imported to our country. It is included in the main herd Kabiuk Stud Farm. Ganglia 2 is the daughter of stallion Gibrid of the Bend Or line. Her mother Gorden is of the St. Simon line. The development of that family started through Regina that left after herself the mares Korona, Karolina and Marta. Along the Korona branch the family ends in the third generation and with Karolina in the fourth. Nowadays the family is

presented through the daughters Gorkia – Dominga, Saragosa and Selta Vigo. A total of 12 mares in the family have been used, three of which are recently in breeding. Two of

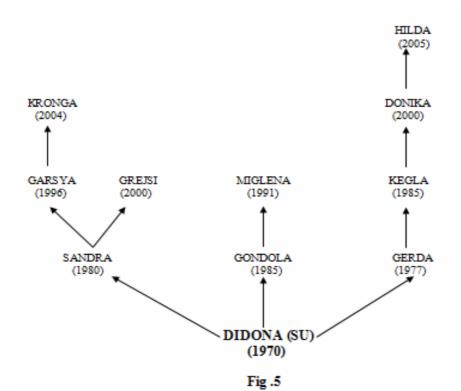
Regina's daughters – Marta (1976) and Mary (1978) are winners of the Oaks prize and in 1972 Florida won "Oaks" and "Derby".





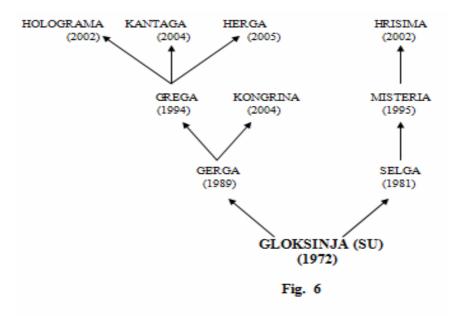
<u>Didona</u> was born in 1970 and at the age of three was imported to Kabiuk Stud Farm. Didona is one of the famous mares in the population. Mother of four mares that won the Oaks prize – Gerda (1980), Komanda (1982), Sandra (1989) and Kanada (1980).In 1980 Gerda also won the Derby prize. Kegla, daughter of Gerda, is also from that family and she won the Oaks prize in 1989.. The family

develops mainly through two branches – those of Sandra and Gerda, while the third one – that of Gondola has been terminated in the third generation with Miglena. By Sandra, through Garsya the branch is currently continued by Kronga, and through the Gerda branch the family developed to the fifth range. Nowadays the family is presented by four mares (**Fig. 5**) Kronga, Grejsi, Donika and Hilda.



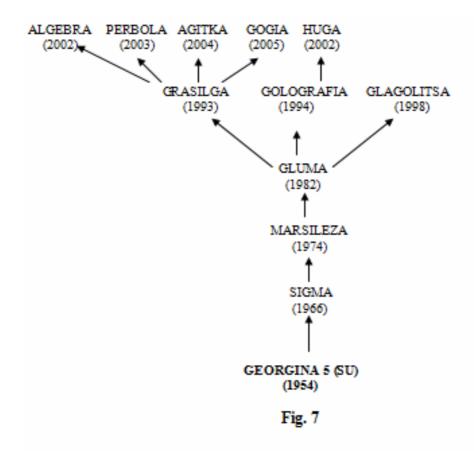
Gloksinja was included in breeding at the Kabiuk Stud Farm comparatively late – in 1976. Nevertheless she also became the originator of a family (Fig. 6), through her two daughters Gerga and Selga. Through the Selga branch the family is presented not as marked as

through that of Gerga. The family as a whole comprises four families with nine mares, of which currently active are seven – Kongrina, Grega, Holograma, Kantaga, Herga, Misteria and Hrisima.



An intensively developing family is that of mare **Georgina 5 (Fig. 7)**. Key mares from that family are Gluma and her daughter Grasilga. Georgina is one of the first mares

imported in the country. She started breeding in 1956 at the Kabiuk Stud Farm. Nowadays active mares are Algebra, Perbola, Agitka, Gogia and Huga.



Gotovalnia was also included in breeding at the Kabiuk Stud Farm after 1956. For the studied period the family developed to the fourth generation and includes a total of six mares (Fig. 8). The Gotovalnia family is represented no so much by the number of mares but by the quality of stallions and mares belonging to it. Against the background of horses from other families that won Derby and Oaks prizes, that of Gotovalnia is a record winner. There are six winners of the Derby prize - Margo (1961) and Regia (1969), (daughters of Gotovalnia); Neron (1978) and Miroliub (1981), (sons of Regia); Gambia (1990) and Gremor (1992), (from Marinika), and Gambia's daughter - Grigoria - won both prizes "Derby" and "Oaks" in 1996.

The development of the other families is at a different level. Geografia is presented through four mares, currently active being only the Nympha mare. Tsigayka mare (from Geografia) is also from that family line and she won the Oaks prize in 1967. The families of Ellada, Asia and Rita are represented by four mares and that of Gidria — by three. Nevertheless, those families have approved representatives included in the Bulgarian Stud Book and development continues through them.

CONCLUSION

Families and mares imported from Russia are extremely important for the development of the population of the Thoroughbred horses in our country. Their significance involves mostly the elite stallions and mares belonging to the first ten families, winners of Derby and Oaks prizes.

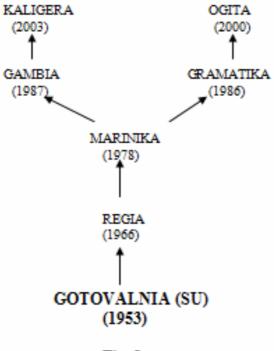


Fig. 8

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