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EVALUATION OF SIRE AND DAM LINES OF POLISH BRED ARABIAN HORSES ON THE BASE OF THEIR SHOW SUCCESSES

**OCENA RODÓW MĘSKICH I LINII ŻEŃSKICH
KONI CZYSTEJ KRWI ARABSKIEJ WYHODOWANYCH W POLSCE
NA PODSTAWIE ICH SUKCESÓW POKAZOWYCH**

Summary. Polish bred Arabian horses are very well known all over the world for their spectacular show and breeding successes. The aim of this study was to evaluate sire and dam lines of Polish Arabian horses on the base of their show successes in championships of a different range. The study was carried out on information concerning 278 Polish bred (national and private) Arabian horses winning as champion or vice-champion in regional, national, international, European, All Nations Cup and World Championships between 1997 and 2010. Results of the study showed a spectacular domination of Saklawi I and Kuhailan Haifi sire lines and Milordka dam line among Polish Arabian horses winning championships all over the world. These lines were the most numerous, the highest scoring and with the highest points score for one horse. These results can help breeders to plan the breeding program for show horses based on the best sires descending from the mentioned above sire and dam lines.

Key words: Arabian horses, sire and dam lines, show successes

Introduction

Arabian horses have been bred in Poland for centuries. Polish breeding is based on material descending from desert-bred mares and sires in purity of blood (ROZWADOWSKI 1972). The expansion of the 19th century Polish breeding was disturbed by the outbreak of world wars I and II, which nearly destroyed most studs and populations. Only 59 mares and 8 stallions were rescued. Over the next 50 years Polish breeding was reconstructed on the base of the national studs in Janów Podlaski, Michałów, Kurozwęki

and Białka (PRUSKI 2006). The breeding goal for Polish Arabian horses is oriental beauty, proportionally built body, graceful movement, health and stamina (SOBCZYŃSKA 2010). Polish bred Arabian horses are very well known all over the world for their spectacular show and breeding successes (PIESZKA and KULISA 1996). Polish breeders won, till 2010, three times the Breeders Cup and six times All Nations Cup (ALL NATIONS CUP), Polish bred horses were titled many times World-, European-, International-, USA-, Scandinavian etc. champions. It is also known that Polish Arabian horses belong to different genetic groups (GŁAŻEWSKA et AL. 2007, GŁAŻEWSKA 2010). Sire and dam lines are frequently used for describing Arabians population (BUDZYŃSKI et AL. 1997). The aim of this study was to evaluate sire and dam lines of Polish Arabian horses on the base of their show successes all over the world.

Material and methods

The study was carried out on information concerning 278 Polish bred (national and private) Arabian horses winning as champion or vice-champion in regional, national, international, European, Breeders and All Nations Cup Championships between 1997 and 2010 years. All studied horses belonged to 7 sire lines and 15 dam lines. Successes of the horses were estimated on the base of point scale worked out by European Conference of Arab Horse Organizations (ECAHO, EUROPEAN...) (Table 1).

Table 1. Point scale for estimation of Arabian horses show successes

Tabela 1. Punktowa skala oceny sukcesów pokazowych koni czystej krwi arabskiej

Title Tytuł	Championship range – Ranga pokazu						
	world światowy	All Nations Cup and European Puchar Narodów i Europejski	international A class międzynarodowy klasy A	international B class międzynarodowy klasy B	international C class międzynarodowy klasy C	national narodowy	regional regionalny
Champion Czempion	22	18	14	12	11	11	9
Vice-champion Wiceczempion	20	16	12	10	9	9	7

After summing up the points obtained for each title of every horse the significance of differences between sire lines separately and dam lines separately were analysed using ANOVA one-factor variance. Tukey's test was used for estimating significance of differences between the studied sire and dam lines.

Results and discussion

Among all studied champions and vice-champions 158 were females (fillies and mares) and 120 were males (colts and stallions). These horses got totally 687 titles and 7291 points according to ECAHO scale which gives on average 26.22 point per one horse (Table 2). This result is excellent and shows that Polish Arabian horses are champions and vice-champions in higher class championships.

Table 2. Evaluation of show successes of Arabian horses descending from different sire lines
Tabela 2. Ocena sukcesów pokazowych koni czystej krwi arabskiej pochodzących z różnych rodów męskich

Sire line Ród męski	n	Σ points Σ punktów	Number of points per 1 horse Liczba punktów na 1 konia
Bairactar	10	171	17.10 A
Ibrahim	45	1 005	22.33
Ilderim	28	790	28.21
Krzyżyk	7	142	20.28
Kuhailan Afas	21	378	18.00 a
Kuhailan Haifi	66	2 011	30.45 Aa
Saklawi I	101	2 794	27.66
Total – Ogółem	278	7 291	26.22

Means in columns marked by the same capital letter differ highly significantly at the level of $P < 0.01$.

Means in columns marked by the same small letter differ highly significantly at the level of $P < 0.05$.

Średnie w kolumnach oznaczone tymi samymi wielkimi literami różnią się wysoce istotnie na poziomie $P < 0,01$.

Średnie w kolumnach oznaczone tymi samymi małymi literami różnią się wysoce istotnie na poziomie $P < 0,05$.

Describing sire lines (Table 2) it was observed that more than 36% of all titled horses belonged to Saklawi I sire line (101 horses). This line is extremely popular these days all over the world. Also Kuhailan Haifi line was numerous (23.7%, 66 horses). Only 7 titled horses belonged to Krzyżyk line (2.5%) and 10 to Bairactar line (3.6%). The highest sum of ECAHO points got by all champions and vice-champions was noted for most numerous Saklawi I and Kuhailan Haifi lines (respectively 2794 and 2011 points) opposite to the lowest score for Bairactar (171 points) and Krzyżyk (142 points) lines (Table 2). The most important indicator of our study was the average number of scored points per one titled horse from particular line. The highest average score was shown for the most numerous and also for the highest scoring lines – Kuhailan Haifi (30.45 point) and Saklawi I (27.66 point). These results show that horses from Kuhailan Haifi lines were titled in higher class championships than horses from Saklawi I line. Average scores for horses from Bairactar line (17.10 point) and Krzyżyk line (20.28 point) were the lowest (Table 2). It was also shown that differences between horses from Kuhailan

Haifi line and Bairactar and Kuhailan Afas lines were statistically significant ($P < 0.05$ and $P < 0.01$). The most titled stallions in our study were: Girlan-Bey 2002 grey (Pesal \times Gracja-Bis) bred by Niewierz stud descending from Ilderim and Gazella lines scoring 163 points; Esparto 2002 grey (Ekstern \times Ekspozycja) bred by Michałów stud descending from Kuhailan Haifi and Milordka lines scoring 146 points and Grafik 1996 grey (Eukaliptus \times Gaskonia) bred by Michałów stud descending from Ibrahim and Gazella lines scoring 102 points. CHMIEL and GAJEWSKA (2006) shown similar to this study results for horses of Saklawi I line estimated only in Polish National and Junior Championships. PIESZKA and KULISA (1996) showed that after world war II till 1993 most numerous were champions from Ibrahim and Saklawi I sire lines and the least numerous were Latif and Kuhailan Adjuze lines which is similar to the results obtained by CHMIEL et AL. (2004). The differences are connected with a very wide use of many stallions descending only from few lines in recent years, for example Gazal Al Shaqab from Saklawi I line or Monogramm and Ekstern from Kuhailan Haifi line. These stallions could be called “fashionable” these years.

According to dam lines (Table 3) it was stated that nearly 25% of the studied champions and vice-champions belonged to Milordka dam line (68 horses). Next with 44 horses was Gazella dam line (15.8%). Only one champion represented Karima line (0.4%), 2 horses (0.7%) – Cherifa and Adjuze lines and 6 – Semrie line (2.2%). Also horses from two most numerous lines mentioned above got the highest sum of ECAHO points: horses from Milordka line – 2275 points, horses from Gazella line – 1421 points and from Szamrajówka line – 1033 points. The lowest number of points was noted for the least numerous lines – Adjuze, Cherifa, Karima and Semrie – respectively 14, 18, 32 and 151 points. The highest average score for one studied champion or vice-champion was estimated for horses from the most numerous and highest scoring Milordka (33.45 point), Gazella (32.29 point) and also for the only horse from Karima line (32 points). Next places were estimated for Rodania line with only 12 titled horses (28.71 point) and for Szamrajówka line – 25.19 point. The lowest score was calculated for Adjuze (7 points) and Cherifa (9 points) lines (Table 3). The differences between horses from Milordka line and from Mlecha and Scherife lines were significant (respectively $P \leq 0.05$ and $P \leq 0.01$). The most interesting was the fact of obtaining fourth place for Semrie line (27.17 point) which is one of the less numerous lines. The most titled mares were: Emandoria 2004 grey (Gazal Al Shaqab \times Emanda) bred by Michałów stud descending from Kuhailan Haifi I and Milordka scoring 219 points; El Dorada 1998 grey (Sanadik El Shaklan \times Emigrantka) bred by Michałów stud descending from Saklawi I and Milordka lines scoring 190 points; Kwestura 1995 chestnut (Monogramm \times Kwesta) bred by Michałów stud descending from Kuhailan Haifi I and Milordka lines scoring 169 points and Pianissima 1998 bay (Gazal Al Shaqab \times Pianosa) bred by Janów Podlaski stud descending from Saklawi I and Szamrajówka lines scoring 161 points. PIESZKA and KULISA (1996) showed similar to this study results for Milordka, Gazella and Szamrajówka lines after the world war II till 1993. Also BUDZYŃSKI et AL. (1997) pointed Milordka dam line as one of the most popular and important in Polish breeding in recent years. This tendency could be explained by the stabile use of mares from the mentioned above dam lines which are the base of Polish breeding.

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Table 3. Evaluation of show successes of Arabian horses descending from different dam lines
Tabela 3. Ocena sukcesów pokazowych koni czystej krwi arabskiej pochodzących z różnych linii żeńskich

Dam line Linia żeńska	n	Σ points Σ punktów	Number of points per 1 horse Liczba punktów na 1 konia
Adjuze	2	14	7.00
Cherifa	2	18	9.00
Gazella	44	1 421	32.29
Karima	1	32	32
Milordka	68	2 275	33.45 Aa
Mlecha	17	313	18.41 a
Rodania	12	344	28.71
Sahara	18	324	18.00
Scherife	11	190	17.27 A
Selma	11	267	24.27
Semrie	6	151	25.17
Szamrajówka	41	1 033	25.19
Szweykowska	22	428	19.48
Ukrainka	11	218	19.82
Wołoszka	12	263	21.95
Total – Ogółem	278	7 291	26.22

Means in columns marked by the same capital letter differ highly significantly at the level of $P < 0.01$.

Means in columns marked by the same small letter differ highly significantly at the level of $P < 0.05$.

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Conclusion

Results of the study showed the domination of Saklawi I and Kuhailan Haifi sire lines and Milordka and Gazella dam lines among Polish Arabian horses winning championships all over the world. These lines were the most numerous, the highest scoring and with the highest points score on one horse. These results can help breeders to plan their breeding program for show horses based on the best sires descending from the mentioned above sire and dam lines.

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Streszczenie. Konie czystej krwi arabskiej polskiej hodowli, dzięki swoim spektakularnym sukcesom pokazowym i hodowlanym, są doskonale znane na całym świecie. Celem niniejszej pracy była ocena rodów męskich i linii żeńskich koni czystej krwi arabskiej wyhodowanych w Polsce na podstawie ich sukcesów pokazowych. Badania przeprowadzono na podstawie danych dotyczących 278 koni arabskich polskiej hodowli (państwowej i prywatnej) odnoszących sukcesy jako czempiony i wiceczempiony w pokazach różnej rangi (regionalnych, narodowych, międzynarodowych, europejskich i światowych oraz w Pucharze Narodów) w latach 1997-2010. W wyniku analiz wykazano zdecydowaną dominację rodów męskich Saklawi I i Kuhailan Haifi oraz rodziny żeńskiej Milordka wśród czempionów i wiceczempionów. Te linie były najliczniej reprezentowane wśród zwycięzców, charakteryzowały się też największymi sumami zdobytych punktów, jak również największą średnią liczbą punktów przypadającą na jednego przedstawiciela poszczególnych linii. Powyższe rezultaty mogą być pomocne dla hodowców w planowaniu kojarzeń bazujących na koniach, zwłaszcza ogierach, z najlepszych rodów męskich i rodzin żeńskich.

Słowa kluczowe: konie czystej krwi arabskiej, rody męskie, rodziny żeńskie, sukcesy pokazowe

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