

Evaluation of exterior in selected pigeon breeds – part I: Pouters and Croppers

Abstract

Based on differences in external features as well as their intended purpose, pigeon breeds are divided into ten groups. Due to the large number of breeds, this work focuses on the description and evaluation of the fourth group of pigeon breeds – Pouters and Croppers. A common characteristic of this group is a remarkably large crop, which both males and females can inflate with air. The primary objective of this work was to map the current state of the exhibition sector in pigeon breeding and to compare the external traits of selected breeds with the valid European standard. In total, 530 pigeons were evaluated across eight Slovak exhibitions as part of this study. When comparing breed standards with expert judging reports from exhibitions, the most frequent exterior faults in the Slovak Pouter were related to color or markings (43.0%), followed by poor crop inflation (36.8%) and deficiencies in tail size and shape (35.2%). Deviations from the standard body type were recorded in 25.4% of individuals, while atypically shaped heads occurred in 4.1%. In the Pomeranian Pouter, defects associated with short legs dominated, affecting 49.5% of the pigeons. Other frequently recurring faults included a short neck (42.6%), poor crop inflation (21.3%), and insufficient back coverage (19.3%). Posture defects were noted in 9.9% of the specimens. The Brunner Pouter most commonly exhibited insufficient crop inflation (40.0%), feather defects (23.7%), incorrect stance and body carriage (20.7%), and deficiencies in overall body formation (16.3%). Among the external advantages across all three evaluated breeds, correct leg length and posture were highlighted in 80%. These findings indicate that breeding is a complex, multifaceted process in which breeders often prioritize certain traits over others. In such cases, it is recommended to focus on traits that repeatedly manifest as deficient and to eliminate these faults through systematic selection of individuals.

Keywords: pigeons, pouters and croppers, standard, exterior, feathers

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Introduction

Exhibitions are a motivator and a tool for many breeders to improve breeding standards and individual exterior characteristics. This applies to both pigeons and other species of animals. Breeding is guided by a recognized standard for a given breed, which determines the range within which the breeder should orient themselves in this activity. By summarizing all the characteristics listed in the standard, we obtain an individual who should come as close as possible to this ideal.¹ Before preparing for the exhibition, the breeder selects suitable individuals and checks their health. It is necessary to think about exhibition preparation well in advance. At least 4 weeks before the planned exhibition, the pigeons become accustomed to handling and staying in the exhibition cage. Health status, feather quality, body condition, and weight are monitored, especially for utility breeds. For pigeons with feathered decorations on their legs and tails, proper management of breeding conditions regarding pollution is important. A few days before the show, a bath is also possible, which is especially recommended for white pigeons. Before being placed in crates, the pigeons are checked again and, if necessary, their feet, nostrils, and beaks are cleaned. Pigeons are usually transported to shows individually, but for some breeds, it is also advisable to place them together in single crate.²

Exhibitions are typically classified as local, regional, special, national, and international events. Each begins with the reception of animals, and their evaluation takes place before the exhibition officially opens, without public access. The judge does not know the animal's owner's name, which helps ensure a more objective assessment. Each

judge is properly trained, has successfully completed both theoretical and practical exams, and must also be an active pigeon breeder. Given the wide variety of recognized pigeon breeds, years of experience and practice are essential for accurately assessing an animal. Judges need to learn to identify the specific traits of different breeds according to the European standard and stay current on the latest trends in preferred exterior features.³ The aim of this study was to thoroughly evaluate the external features of selected pigeon breeds belonging to the fourth group - pouters and croppers. This is one of the most distinctive and oldest groups of ornamental pigeons, with a breeding history in Europe spanning over 400 years; as a result, their representation at shows is among the most numerous.⁴ Therefore, based on the current standard, the goal was to compare individual findings and identify the most common advantages and deviations in the displayed birds. Additionally, this work's results aim to highlight current breeding trends and to suggest potential directions for future development.

Material and methods

Selection of pigeons breeds

Due to the high number of pigeon breeds and extensive definitions of their standards, three breeds of pouters were selected for this study. They are those most often presented at exhibitions and represent the most valuable breeding core of the whole group. The exterior of 530 pouters was judged at 8 Slovak exhibitions in 2024 and 2025. Our study included: Pomeranian Pouter (202 pcs), Slovak Pouter (193 pcs), and Brunner Pouter (135 pcs).

Standard of selected pigeon's breeds from the 4th group – Pouters and croppers

Pomeranian Pouter (PP)

The Pomeranian Pouter is one of the largest pouters. Its origins are linked to the territory of Pomerania, which is located in northern Germany on the Baltic Sea coast. The Pomeranian Pouter was originally called the Old Dutch Cropper, but the name was changed to Pomeranian pouter about 1850. Most authorities believe the two breeds are closely related. It is an exhibition breed of a soft-feathered, long-legged, erect Pouter, but not quite as erect as the English Pouter. It bears a close resemblance to the Old Holland Pouter from which it is thought by some to be derived. The physical attributes of this breed, such as the huge but proportioned globe, the massive body, the long, powerful limbs, the huge muffs, and the upright station of 60 to 80 degrees, combine to give this breed the look of pure power. The length of the Pomeranian from the tip of the beak to the end of the tail should be 20 to 24 inches with a corresponding weight of 22 to 30 ounces. It has a much thicker and wider body than the English Pouter. PP is plain-headed and heavily muffed. The heavy muff feathers make the breed appear somewhat shorter than it really is.⁵

Pomeranians come in a wide variety of colors. The colors are to be rich, clean, and lustrous. The colors are red, yellow, black, blue, silver, brown, khaki, various checks, and white self. They are in a wide variety of markings. The pied varieties are colored with white markings as follows: a half moon placed in the middle of the crop with both ends of the same size and length ending approximately ½ inch from the eyes. The flights, belly, legs, and muffs are to be white. All color stops to be clean and distinct. Self-varieties to be colored with no white plumage. Tail-marked to be pure white with a colored tail. There are two classes for splashes, light and dark. The light splashes are to have a white ground cover with color splashing and pure white muffs, flights, and tail. The dark splashes are just the opposite, with a dark ground cover, white splashing, and solid-colored boots, flights, and tail. Tigered or mottle varieties have solid colored flights, muffs, and tail but the effect on the body is one of having every other feather white (Figure 1).⁶



Figure 1 Pomeranian Pouter – from left: Blue-Barred colour, 95points; Blue-Barred colour in English type, 95 points.

Slovak Pouter (SP)

The Slovak Pouter originates from the western region of Slovakia, where it was developed in 1870. Although facing a population decline, this breed of pigeons is very popular in its country of origin and has also been raised in several European countries. Varieties belonging to this type of pouter-cropper pigeons, which can fly well, but the aspect of appearance is more of a concern in their development.⁵ The SP is defined by a slender, highly erect posture. Its most defining

feature is the crop, which, when inflated, assumes a distinct pear-shaped (pyriform) silhouette, differentiating it from breeds with spherical crops. The limbs are elongated and clean-legged (devoid of muff or feathers), contributing to its graceful appearance.⁷ The breed standard recognizes an extensive range of colorations, categorized by pigment intensity and specific patterns. Self-Colored represent uniform pigmentation across the entire plumage. The primary recognized colors include white, black, red, and yellow. Into patterned varieties belong white-flighted - these specimens feature a solid base color (typically black, blue, red, or yellow) with contrasting white primary flight feathers. Tiger and Mottled are characterized by an intricate distribution of white and colored feathers throughout the body. Barred and checkered - this category includes blue-barred (with black bars), silver-barred, red-barred, and yellow-barred variations. Luster and Iridescence - a high degree of metallic luster, particularly on the inflated crop, is a critical quality indicator in show specimens (Figure 2).⁸



Figure 2 Slovak Pouter – from left: Black colour with contrasting white head and flight feathers, 97 points; blue colour, 96 points; yellow colour, 94 points.

Brunner Pouter (BP)

The Brunner Pouter is a breed of fancy pigeon originating in Brno, Czech Republic. The Brunner Pouter is one of the traditional Central European breeds of ornamental pigeons. The Brunner Pouter exhibits a compact, fine-boned frame, typically measuring approximately 13 inches (33 cm) in height, in contrast to the taller English Pouter, which can reach 16 inches. This diminutive size contributes to its elegant, streamlined appearance, with a long, narrow body that avoids bulk and thickness, prioritizing finesse in bone structure and overall proportions.⁵ The breed's posture is characterized by an upright stance supported by long, slender legs that are finely boned and positioned a finger's width apart, creating a tiptoe elevation that accentuates height and gives the bird a reaching, elongated silhouette. This leg structure, combined with a small, rounded body, fosters an impression of delicacy and poise, with the wings held high to form a subtle hollow between the shoulders. A defining feature is the inflatable crop, known as the globe, which expands into a perfectly spherical shape during display, resembling a golf ball in its roundness and set high on the chest with clear demarcation from the breast and back.⁹ Standard colors for the Brunner Pouter include black, red, yellow, and white, with self-colored varieties predominant and typically free of barring for a uniform appearance. Additional self-colors recognized in standards encompass blue, silver, mealy, cream, duns, browns, and khakis, where intense coloration such as a green sheen in blacks or rich golden tones in yellows is prized for show quality (Figure 3).⁸

These self-colors are bred to develop richly in adults, with young birds often culled for poor pigmentation only after full plumage development. The breed displays a wide range of markings, including pied, stork-marked (white body with colored head, tail, flights, and bib), and grizzle (alternating white and solid feathers or tigered

patterns). Other patterns, such as gansel (magpie-like), mottles, and bars featuring blue, silver, ash-red, or mealy variants in some lines, are also accepted, with breeding focused on achieving uniformity and balance for exhibition purposes.¹⁰



Figure 3 Brunner Pouter – from left: blue color, 96 points; blue-silver color, 94 points.

Assessment of pigeons

All breeds and colors that are part of the European Standard are judged.⁸ Each pigeon entering the show is given a pigeon's assessment card, which is attached to the cage and individuals are evaluated by trained assessors with sufficient theoretical and practical experience

and complete training. Pigeon evaluation takes place before the exhibition begins, without public access. Everyone is compared in detail with the appropriate standard. For the correct assessment of an individual, knowledge of its body structure and proportions, the specifics of individual pigeon breeds, their coloring and drawings, the current breeding trends for the respective breeds, and the direction of pigeon breeding is necessary.¹ As part of the evaluation of the exterior of pigeons, the assessor evaluates not only the advantages but also the shortcomings of the evaluated individuals, as well as makes recommendations within individual positions. Each evaluated individual is assigned a pigeons' assessment card, which indicates the cage number, ring number, hatching year, sex, breed, coloring, rating in individual positions (advantages, recommendations, and errors), point and verbal evaluation, possible award, date of exhibition, stamp of the exhibition, and judge signature or stamp.¹¹ The pigeons' assessment card contains the columns for strengths, recommendations, faults, exclusion faults and faults in the breeder's care. The strengths column lists only the individual's positive qualities. Often used are adjectives such as typical, distinctive, excellent, outstanding or very good. When making recommendations, the assessor focuses on what the pigeon lacks to be a typical representative of the breed. The faults column lists gross deficiencies. The assessment results in a point rating and the corresponding grade (Table 1). The evaluation system is set so that the highest possible award that a pigeon can get without even one recommendation is 97 points with a verbal expression on the assessment card - a typical representative of contemporary breeding.^{1,12}

Table 1 Method of filling the pigeons' assessment card with final score

Points	Symbol	Verbal expression	Positive points	Wishes	Faults	Disqualifying faults in condition
97	E	excellent	4 and more	-	-	-
96	F	fine	3	1	-	-
95	VG	very good	3	2	-	-
94	VG	very good	3	3	-	-
93	VG	very good	2	4	-	-
92	G	good	2	2	1	-
91	G	good	1	3	2	-
90	S	satisfactory	1	3	3	-
0	US	unsatisfactory	-	-	4	1
0	NR	not rated	-	-	-	1

Statistical analysis

The individual positions of selected pigeons, as well as their advantages, recommendations and faults, were summarized from the valuation tickets of the evaluated individuals. The statistical analysis was performed using Microsoft Excel 2007 software. To compare the differences of individual positions between different breeds of pouters, the Chi-square test (χ^2 test) with a significance level of $\alpha=0.05$ was used.

Results and discussion

The study assessed 530 pigeons displayed at 8 Slovak exhibitions by breeders from 12 European countries (Table 2). The evaluation of the pigeons' exterior provides valuable insights into the current

condition of the breeds studied and the future directions of breeding efforts. Pomeranian Pouters are a popular breed of pigeons worldwide, as evidenced by their high participation rates at selected exhibitions. Breeders are particularly drawn to their tall, elegant posture, prominent foot feathering (muffs), and well-developed crop. Among the pouter breeds described, they are the largest in size.⁵ The individuals presented by Croatian breeders were particularly outstanding. This breed was exhibited in 21 color and marking varieties, with the white variety being the most frequently presented (41 individuals). This color has long been the most widespread. A significant proportion of the pigeons impressed the judges primarily with their excellent conformation, as well as their stance and body carriage, which play a crucial role in the overall impression of the Pomeranian Pouter.

Table 2 Evaluation of the exterior faults and advantages of selected pigeon breeds

Exterior faults	Slovak Pouter		Pomeranian Pouter		Brunner Pouter		P-value
	pcs -193	%	pcs -202	%	pcs -135	%	
Poor crop development	71	36.8	43	21.3	54	40	<i>P</i> <0.05
Incorrect tail length or body size	68	35.2	21	10.4	11	8.1	NS
open back and dorsal line	27	14	39	19.3	10	7.4	NS
low legs and posture	–	–	100	49.5	22	16.3	NS
defects in colour pattern or lacing	83	43	10	5	7	5.2	NS
Exterior ideals and advantages							
correct length of legs and posture	169	87.6	196	97	107	79.3	<i>P</i> <0.05
correct figure and body shape	144	74.6	182	90.1	113	83.7	<i>P</i> <0.05

Note: Percentual and statistical significance (*P*<0.05) are calculated from a selected breeds of SP - 193 pcs, PP - 202 and BP - 135 pcs; NS – non significant

The body carriage angle is one of the most distinctive traits that differentiate otherwise similar large pouter breeds, such as the Old German or the English Pouter. In the Pomeranian Pouter, this angle typically ranges from 45 to 60 degrees; however, according to Axel Sell, a long-time breeder and expert in pigeon genetics, individuals with a 60-degree carriage are currently preferred and recommended for breeding. This requirement is generally met without difficulty among the exhibited pigeons.¹³ This assertion was further confirmed by the results of this study, with correct stance and body carriage recorded in 97% of the Pomeranian Pouters (Table 1). An indispensable aspect of exhibiting this breed is the requirement that the pigeon adopt the desired posture and inflate its crop during judging. This is achieved through meticulous preparation, during which the pigeons acclimate to the confined space of the exhibition cage. It can be challenging for judges to accurately evaluate an animal if it fails to rise or maintains the required stance for only a brief period. Such behavior can, in itself, negatively impact the final scoring.¹¹ This particular issue was recorded only once among the Pomeranian Pouters at the selected exhibitions, which also resulted in that individual remaining unclassified. Short legs and a short neck were undesirable traits frequently noted in the judging sheets. These characteristics create a disharmony in the overall body formation, and in the case of a short neck, it may also be the underlying cause of poor crop inflation. In instances where a short neck occurred in a large proportion of the pigeons, weak crop development was also observed.

According to recommendations, the timing of the judging process is crucial for pouters, as their temperament typically peaks towards midday. Simultaneously, the judge's cooperation is essential, as vocal cues provoke the pigeon to inflate its crop and fully display its posture.¹⁴ Slovak Pouters were among the most numerously represented Slovak national breeds. The black color variety was encountered most frequently; however, the most qualitatively stable group consisted of individuals in the yellow coloration, totaling 39 pcs. This finding aligns with the results of the Special Club Exhibition of Slovak Pouters, where individuals with robust, broad bodies, prominent crop inflation, and intense coloration were likewise presented.¹⁵ This indicates a long-standing trend in the quality of this color variety, despite it being bred by only a narrow group of enthusiasts.⁵ The collection of black-colored Slovak Pouters consisted of 67 individuals; here, breeding efforts should focus on body size, tail width, and the intensity of the luster, particularly on the abdomen and wing shields. Defects relating to narrow bodies and poor luster were specifically noted in this group of individuals.

Furthermore, individuals in the red coloration were evaluated. This group was represented by 23 individuals, generally of average quality.

Exterior defects in this color variety primarily included smaller body size, poor crop inflation, and insufficiently defined markings. The representation of red-colored Slovak Pouters at exhibitions shows a long-term decline. The group of blue white-barred individuals consisted of 22 pigeons of varying quality. There was an alternation between 'Good' and 'Very Good' individuals, although one pigeon achieved 'Excellent' quality. The most common criticisms related to poorly defined and undirty bars, as well as uneven coloration. Another group was represented by blue-black-barred Slovak Pouters, totaling 17 individuals. They formed a generally stable and well-prepared group. Defects were mainly observed in the color intensity on the abdomen and back, along with imperfections in the bar markings. The Isabel white-barred and blue barred color varieties were presented in equal numbers (17 each). The Isabel white-barred pigeons were mainly criticized for their smaller body frames, small heads, and lack of color saturation. In the blue-barred variety, defects in back coloration were noted.

Occasionally, individuals from the yellow-fawn, black tiger, Isabel scaly, silver white-barred, and silver-barred varieties were observed. Brunner Pouters are the smallest among the three pouter breeds described. They captivate breeders primarily with their noble appearance, characterized by delicate body proportions, an upright posture, and a well-tied, globular crop. This breed is also defined by a lively temperament, which judges frequently noted and positively received.¹⁶ A total of 19 color and marking varieties were presented, with the white variety predominating. In a significant number of individuals, insufficient tightness and integrity of the plumage were observed; these defects were strictly penalized, even in individuals that otherwise possessed well-developed, key breed characteristics. A correctly formed body was present in the majority of individuals; however, it is necessary to consider the occurrence of well-developed crop inflation, which is linked to a broader back. This trait is not highly desirable in this breed, as the body formation itself should exhibit delicate contours. According to German judges' recommendations, attention should also be paid during evaluation to a straight stance, divergent limbs, and excessively stiff hock joints, all of which influence body carriage.⁴ The overall evaluation of individuals possessing these undesirable traits did not exceed 94 points.

Conclusion

Based on the results of this work, the assessed pouters exhibited varying degrees of quality across individual exterior traits, with repeated deficiencies in traits typical of specific breeds. Pigeon breeders should keep in mind that breeding should primarily focus on raising healthy individuals, with an emphasis on increasing their

natural resistance and vitality. Regarding the exterior, individuals with extreme or unnatural shapes should not be preferred, as this can be detrimental to good health. This approach contributes to the long-term sustainability of pigeon breeding.

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Conflicts of interests

The authors declare that there are no conflicts of interest.

References

- Adamčík M, Zigo F, Kolenič P, et al. Exterior Evaluation of Selected Breeds of Pigeons: Owls and Frills. *Folia Veterinaria*. 2021;65(2):27–35.
- Tirpák J, Koreň J. Preparing pigeons for the exhibition (Slovak). *Chovatel*. 2019;55(4):12–13.
- Bocko B. European Pigeon Assessment System (Slovak). *Chovatel*. 2014;50(6):8–10.
- Wetzel J. Internationale Hauptsonderschau der Brünner Kröpfer 2024 – anlässlich der Bayrischen Kropftaubenschau in Straßkirchen; 2024.
- Zigo F. *Breeding and breeds of pigeons, poultry and exotic birds* (in Slovak). 1st edn. Košice: UVLF in Kosice; 2017. p. 418.
- BDRG, Bund Deutscher Rassegeflügelzüchter. Deutscher Rassetauben Standard. Deutschland; 2022.
- Bocko B. *Pigeon breed book (Slovak)*. 2018;265.
- EE, Entente Européenne. *EE Documentation – Pigeon breeds*. 2019.
- Raček V, Chrástil S, Lukovský L. *Pigeon breed book (Czech)*. 1st edn. Praha; 2008. p. 300.
- Wishenhunt C. Blue White Brunners. 2020:42–52.
- EE, Entente Européenne. *Regulations for European Shows of the EE*. Billund; 2022:17.
- Lacková Z, Baranová I, Zigo F, et al. Deviations of exterior characters from breeding standards of chicken – part II: miniature and ornamental breeds. *Int J Avian & Wildlife Biol*. 2023;7(1):8–13.
- Sell A. *Pommersche Taubenrassen*. 1st edn. Achim: Verlag Sell publishing; 2010. p. 172.
- Veselý A. Breeding and judging (part 4) – Pouters pigeons.
- Krivosudský I, Podberský I. Slovak Pouters at the 22nd CVZ Nitra 2019 (Slovak). *Chovatel*. 2019;55(12):10–11
- Sell A. *Pigeon Genetics*. 1st edn. Achim: Sell publishing; 2012. p. 528.