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Ministry of agriculture, food sovereignty and forestry –
National Rural Development Programme 2014/2022 – Measure 10.2 –
Conservation, use and sustainable development of genetic resources
in agriculture



Project coordinator
Prof. Silvia Cerolini
Department of Veterinary Medicine and Animal Sciences
University of Milan
Email silvia.cerolini@unimi.it
www.pollitaliani.it

CONSERVATION OF BIODIVERSITY IN ITALIAN POULTRY BREEDS:
deepening and monitoring
TuBAvi-2



Breed data sheet

BRIANZOLO
Meleagris gallopavo Sp.

**Origin and morphological,
genetic, reproductive,
and productive traits**



**FONDO EUROPEO AGRICOLO PER LO SVILUPPO
RURALE: l'Europa investe nelle zone rurali**



**MINISTERO DELL'AGRICOLTURA
DELLA SOVRANITÀ ALIMENTARE
E DELLE FORESTE**





The presented data were registered in the nucleus population conserved at the University of Milan (UniMI).

Latest update: May 6th, 2024



Brianzolo

Meleagris gallopavo Sp.

Breed data sheet: origin and morphological, genetic, reproductive, and productive traits

Breed origin and development

Name of the breed	Brianzolo
Synonyms or local names	<i>Nostrano</i> (local) turkey
Geographic origin	Lombardy
Geographic distribution	Northern Italy, Brianza
Estimated total population size	15 (Castillo et al., 2021)
Extinction risk status (FAO, 1998)	Critical conserved
Any other specific information	-

Historical origin
<p>Light turkey originated from Lombardy, traditionally present in rural breeding. Locally known as <i>Nostrano</i> (local) turkey. According to oral tradition, the reticulated silver bronze colour seems to have been prevalent in Brianza in the past.</p> <p>Brianzolo turkey is similar for both size and colour to Belgian <i>Ronquieres</i> breed. Well-known and appreciated since early 1900, the Brianzolo population risked extinction. It was however rescued and conserved thanks to fancy breeders' activity, which led to the acknowledgment of a breed standard on behalf of the Italian Federation of Poultry Breeds (<i>Federazione Italiana Razze Avicole</i>, FIAV) in 2013.</p>

Qualitative and quantitative morphological traits in adult breeders

Discrete or qualitative traits

Plumage colours	Reticulated silver bronze in different degrees of intensity
Colour features	Bi-color
Chick plumage colour	
Head	Naked in the male, slightly feathered in the female, centrally on the skull
Face	
Neck	Medium-lengthed, arched
Caruncles	Average development; on head and on naked areas of the neck, larger at the base; red, often orange in young birds, changing to bluish-white when excited; the fleshy protuberance above the beak elongates during excitement, more in the male than in the female, retracts while feeding and is pendant when displaying.
Throat wattle colour	
Iris colour	Dark
Beak colour	Light brown with slight blackish stripes
Skin colour	
Shank colour	Pinkish with dark scales
Shank feathering	Free from feathers
Skeletal variants	-
Other specific and distinct visible traits	-

Colour pattern
<p>In the male, neck, breast, and upper part of the back brown-grey with evident dark mesh-like pattern. Primaries dark grey, with fine whiteish-white peppering at the end. Outer colour dark grey with very thin white edging, inner colour dark grey with silver white peppering at the end. Secondaries: from the first to the fifth feather, ivory with intense dark grey peppering on the central part, mainly on rachids' sides; other feathers iridescent brown with black peppering, with a white band at the end on the feathers that are closest to the body. Main wing coverts' outer colour cinnamon and inner colour dark grey close to the rachids, fading to cream with dark grey peppering. All feathers end up with a thin black edging with white tip. Small wing coverts ground colour black with brown-cream mesh-like pattern; feathers end up with a black band with strong metallic lustre. Main tail feathers: light cinnamon colour with peppering on the part hidden by tail coverts and ending up with a black band with strong metallic-green luster and a white band at the edging. Main tail coverts cinnamon on the visible half, while the hidden half has a strong peppering which forms a mesh-like pattern. Small tail coverts have a net-like pattern on cream ground, with a black band with iridescent luster and a band with cream barbs at the end. Remaining plumage of the back alternately crossed with distinct parallel black and brown stripes down to the shoulders. In the female, colours approximately identical to the male's, but with</p>

Brianzolo male and female

more evident mesh-like pattern. Feathers on back and breast end up with a white edging. Small wing coverts and upper part of the back have a black ground with cream mesh-like pattern. Belly and legs ivory with faint mesh-like pattern also in the down.

Quantitative traits

Adult male weight \pm DS* (g)	4527 \pm 186
Adult female weight \pm DS* (g)	2658 \pm 30

*SD: standard deviation

Genetic traits

Characterisation of the breed with Single Nucleotide Polymorphisms (SNPs)

Molecular marker	Axiom TurkeyHD Genotyping Array
Laboratory that performed the analyses	Laboratory of Animal Genetics and Genomics Department of Veterinary Medicine and Animal Science (DIVAS) University of Milan
Analysed parameters	MAF: minor allelic frequency Ho: observed heterozygosis He: expected heterozygosis F _{HOM} : inbreeding coefficient

Year	N**	MAF	Ho	He	F _{HOM}	
2019	Average	31	0.15	0.213	0.195	-0.074
	SD*					0.18

*SD: standard deviation; **N: number of samples



Avian Center for the Conservation of Local Genetic Resources, UniMI



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Bibliography

Manuale STARDARD ITALIANO DELLE RAZZE AVICOLE (*ITALIAN STANDARD OF POULTRY BREEDS* Manual), FIAV, 2013-14.

Reproductive and productive quantitative traits

Oviposition, brooding and incubation data

Age at sexual maturity of females (weeks)	27
Length of first oviposition cycle (weeks)	14 (oct-jan) 16 (apr-jul)
Average annual egg production per female (min-max)*	40 (22-68)
Average clutch size (min-max)	
Clutch interval (days)	
Incubation length (days)	

*As measured during the first year of age, min-max of family line

Egg-quality traits

Parameters	First oviposition cycle*	
	Average	Min-max
Egg weight (g)	70.3	58-81
Shell colour	Pinkish with brown speckles	

* Total n. of measured eggs: 97

Reproductive traits

Incubation parameters	First oviposition cycle	
	Average	Min-max*
Fertility (% produced)	95.8	80-100
Hatchability (% fertile)	78.3	50-86
Hatchability (% produced)	75.0	40-86

*Per family line

Body weight and growth data

Age (weeks)	Male weight (g)		Female weight (g)	
	Average	SD*	Average	SD*
0 (hatching)	47.50	1.05	47.20	2.59
4	265.4	51.8	218.0	11.3
10	927.0	79.2	888.0	5.66
16	1566	170	1241	68.0
21	3013	370	2088	145
30	4650	362	2895	300
33	5005	202	2780	36.1
35	5120	14.1	3330	127

*SD: standard deviation

Rearing traits

Breed type	Quite light turkey, very rustic, good grazer
Growth speed	Precocious
Feathering speed	
Broodiness	High
Parental care attitude	
Ease of breeding	
Male:female ratio for breeding	
Tolerance or resistance to diseases and parasites	Resistant to most common diseases
Tolerance to extremes of temperature	