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

Breed data sheet

ERMELLINATA DI ROVIGO

Gallus gallus domesticus 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 “Sasse Rami” Experimental Farm, in Ceregnano (Rovigo).

Latest update: October 14th, 2023

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Breed origin and development

Name of the breed	Ermellinata di Rovigo
Synonyms or local names	-
Geographic origin	Veneto (Rovigo)
Geographic distribution	Veneto
Estimated total population size	828 (Castillo et al, 2021)
Extinction risk status (FAO, 1998)	Threatened conserved
Any other specific information	-

Historical origin
The selection of this breed started in 1959 at the Poultry Experimental Station of Rovigo, with the purpose to obtain chickens characterised by high quality meat. It is considered a dual-purpose breed, as it also shows good egg-laying properties. The Sussex and Rhode Island breeds participated in the creation of the breed.

Qualitative and quantitative morphological traits in adult breeders

Discrete or qualitative traits

Feather morphology	Normal
Feather distribution	Normal
Plumage structure	Slightly soft, but adherent, abundant; in the female, plumage more adherent and less abundant than in the male
Plumage colours	Classic ermine plumage
Plumage features	Bi-colour, without sexual dimorphism
Chick plumage colour	Yellow down; light grey wing span
Comb type	**Single comb**, upright
Comb spikes	Five or six spikes
Iris colour	Red, yellow permitted
Muffs	Absent
Beard	Absent
Tuft	Absent
Ear-lobe colour	Red
Beak colour	Light horn, darker at the top
Iris colour	Red, yellow permitted
Skin colour	Yellow
Shank colour	Yellow
Shank feathering	Free from feathers
Skeletal variants	-
Other specific and distinct visible traits	-

Colour pattern
White plumage, neck hackle striped with black, main tail feathers and flight feathers marked with black, tail perfectly black.

Quantitative traits

Parameters	Male		Female	
	Average	Min-max	Average	Min-max
Body weight (g)	3437	3200-3940	2322	2000-2500
Body length (cm)	46	44-48	41	37-43
Chest circumference (cm)	39	34-41	36	32-38
Shank length (cm)	11	10-11	9	8-10
Shank diameter (cm)	6	5-6	5	4-5
Wing span (cm)	54	52-54	47	44-47

Genetic traits

Characterisation of the breed with Single Nucleotide Polymorphisms (SNPs)

Molecular marker	Affymetrix Axiom 600K Chicken Genotyping Array
Laboratory that performed the analyses	Department of Agronomy, Food, Natural Resources, Animals and Environment (DAFNAE) University of Padua
Analysed parameters	MAF: minor allelic frequency Ho: observed heterozygosis He: expected heterozygosis F_{HOM}: inbreeding coefficient

Year		N**	MAF	Ho	He	F_{HOM}
2019	Mean	23	0.309	0.199	0.220	0.459
	SD*		0.321	0.192	0.198	0.044

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

Characterisation of nucleus populations with microsatellites and mating plans

Molecular marker	Microsatellites (26 markers)
Laboratory that performed the analyses	Laboratory of Animal Molecular Genetics Department of Veterinary Science (DSV) University of Turin
Analysed parameters	Ne: effective number of alleles Na: observed number of alleles I: Shannon diversity index H-Ind: individual variability index Ho: observed heterozygosis (average H-Ind) He: expected heterozygosis F: fixation index P: average kinship index
Indexes used to schedule mating plans	H-Ind P

Year		N**	Na	Ne	I	Ho	He	F	P
2020	Mean	24	2.929	1.866	0.656	0.318	0.375	0.121	0.67
	SE*		0.339	0.194	0.121	0.059	0.069	0.047	

*SE: standard error; **N: number of samples

Reproductive and productive quantitative traits

Oviposition, brooding and incubation data

Age at sexual maturity of hens (weeks)	23-27
Length of first oviposition cycle (weeks)	N.a.**
Annual egg production per hen (min-max)*	170-190
Average clutch size (min-max)	N.a.**
Clutch interval (days)	N.a.**
Incubation length (days)	21

*As measured during the first year of age, min-max of family line
**N.a.: Not available information

Egg-quality traits

Parameters	First oviposition cycle	
	Average	Min-max
Egg weight (g)	57.5	Not available
Shell colour	Pinkish/brown	

Parameters (sample measurement)	Average	Min-max
Egg weight (g)	58.8	54.4-63.2
Shell weight (g)	4.88	4.32-5.44
Albumen weight (g)	35.1	33.0-37.3
Yolk weight (g)	17.8	16.3-19.3
Egg Shape Index*	0.73	0.71-0.76

* Egg Shape Index (ESI) = short diameter/long diameter x 100

Reproductive traits

Incubation parameters	First oviposition cycle	
	Average	Min-max*
Fertility (% produced eggs)	89	86-91
Hatchability (% fertile eggs)	76	53-79
Hatchability (% produced eggs)	68	46-72

*Per family line

Slaughter data (age: 24 weeks)

Slaughter parameters	Average	
	Male	Female
Live weight (g)	2735	2054
Carcass weight (eviscerated) (g)	1775	1247
Carcass weight (eviscerated) yeald (%)	64.9	60.7

Rearing traits

Breed type	Rural
Growth speed (precocious *vs* tardive)	Tardive
Feathering speed (precocious *vs* tardive)	Tardive
Broodiness	No
Parental care attitude	Yes
Ease of breeding	Easy
Male:female ratio for breeding	1:8
Tolerance or resistance to diseases and parasites	Yes
Tolerance to extremes of temperature	Yes
Reported uses (meat, eggs)	Primary: meat Secondary: eggs

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https://ec.europa.eu/agriculture/rural-development-2014-2020_en

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