



Figure 5. Padovana chicken.

The Robusta Lionata chicken was developed in 1965, also at the Rovigo Experiment Station from crosses between Tawny Orpingtons and White Americans and is also a dual-purpose breed (providing eggs and meat). At hatching, chicks are a tawny colour with brown spots (Figure 2). Adult chickens retain this tawny coloration with black and greenish tail feathers. Females have a strong aptitude to brood. At 4 months of age, the Robusta Lionata chicken weighs around 1.9 kg to 2.0 kg, and is similar in adult male and female body weight to the Robusta Maculata (Table 2). The Robusta Lionata had an average daily weight gain to 156 days of 10.7 g/d and 16.0 g/d, respectively, for females and males (Table 3) which was similar to those observed in Ancona females (9.6 g/d) by Castellini *et al.* (1994).

The Ermellinata di Rovigo chicken was developed in 1959 for meat production from

crosses between the Sussex and Rhode Island breeds. At three months, body weight was 1.7 kg to 1.8 kg. At hatching, chicks are yellow, but adult birds have white plumage with dark pens, helmets and cape (Figure 3). The skin and tarsus are yellow. The Ermellinata di Rovigo had average daily weight gains that were similar to those of the Robusta Lionata (11.6 g/d and 15.7 g/d, respectively, for males and females) (Table 3).

The Pépoi chicken breed is very small but has high-quality meat. This breed is typically found in north-west Italy and at present is one of the few small breeds available in the markets. At hatching, chicks have a clear brown plumage that changes to a gilded colour (Figure 4). The skin and tarsus are yellow. Females have a strong aptitude to brood. The Pépoi breed grows relatively slowly, with average daily gains to 156 days of 5.6 g/d and 8.7 g/d, respectively, for females and males (Table 3). The daily weight gains of the Pépoi breed were significantly lower than those of the other breeds evaluated (Table 3) and were less than those reported for the Ancona breed (Castellini *et al.*, 1994) and the Padovana breed (Lunardi *et al.*, 2001).

The Padovana breed is a fancy breed (FAO, 2004). Its origin is very old, and it was described for the first time in the *Ornitologiae* book of Ulisse Aldrovandi (1600). The origin of this ancient breed is uncertain. It is thought that the Padovana was introduced to Italy from Poland in 1300 by a Padova noble, Giovanni D'ondi dell'Orologio. Before 1899, the Padovana chicken was confused with the Polverara breed. Trevisani (1900) and Pascal (1905) were the first authors to separately describe the Padovana and Polverara breeds. Adult males and females have an average weight of 2.0 kg and 1.8 kg, respectively, with an average daily weight gain of 8 g/d and exhibited maximum daily weight gains at around three months of age (Lunardi *et al.*, 2001). The Padovana breed (Figure 5) has a crest with a very pronounced protuberance of the skull and muff and a beard. The Padovana has black, white, gold, silver, and

Table 4. Traits of Veneto duck breeds (Veneto Agricultural Agency, 2004).

Trait	Germanata Veneta	Mignon
Age of sexual maturity (month)	6-8	7-8
Adult female body weight (kg)	2.7	0.8
Adult male body weight (kg)	3.0	0.8
Egg production	100-120	50-70
Egg weight (g)	70	45-50
Egg colour	White	White



Figure 6. Germanata Veneta duck.

buff coloured plumage with laced patterns within the feathers (FAO, 2004).

Characteristics of the Duck Breeds

Only two breeds of duck are found in the Veneto region: the Germanata Veneta (Figure 6) and the Mignon (Figure 7). The characteristics of the two breeds are shown in Table 4.

The Germanata Veneta duck (Figure 6) was derived from the Real German, and its coloration and form are unchanged. This breed is very rustic, and the female can be crossed with the Barberia duck to produce fat liver for pate. The female of the Germanata Veneta duck produces 100 to 120 eggs per year, which is lower than that reported for the brown Tsaiya and Pekin ducks (Velez *et al.*, 1996). The Mignon is a small white duck with yellow legs, beak and skin (Figure 7). It is found in the southern and eastern part of the Veneto region and is



Figure 7. Mignon duck.

very rustic. Egg production by the Mignon breed is not very important (50 to 70 eggs per year), but this light duck is used for meat production.

Characteristics of the Turkey and Guinea Fowl Breeds

The turkey breeds of the Veneto region are the Ermellinato di Rovigo and the Comune Bronzato. The only breed of guinea fowl is the Camosciata. Characteristic traits of the turkey and guinea fowl breeds are shown in Table 4.

The Ermellinato di Rovigo turkey (Figure 8) was derived from a mutation in the offspring of crosses of local birds to the American Narraganset breed in 1958 and was then selected for increased performance

(Veneto Agricultural Agency, 2004). This breed is of medium size and is early feathering. The Ermellinato di Rovigo is very rustic and well suited to pasture production. The Comune Bronzato turkey is a small breed. The breast, neck, shoulders, and rump are black with rainbow reflexes (Figure 9). Young turkeys have a dark brown tarsus, but the tarsus of adult birds ranges from red to violet. Females of this breed can produce 4 to 5 broods at a time, remaining on the nest for more than 100 days.

The Camosciata guinea fowl (Figure 10) was developed in 1922 (Veneto Agricultural Agency, 2004). The neck and throat skin are blackish, the pens are white with pearl stains, and the tarsus coloration varies from orange to grey. The Camosciata breed is small and at maturity, females are usually larger than the males (Table 5).

Table 5. Traits of the Veneto turkey breeds and guinea fowl (Veneto Agricultural Agency, 2004).

Trait	Ermellinato di Rovigo	Comune Bronzato	Camosciata
Age of sexual maturity (month)	7	7	7-9
Adult female body weight (kg)	4-6	3.0-3.5	1.8-2.0
Adult male body weight (kg)	10-12	6-7	1.8
Egg production	70-100	70-100	100-120
Egg weight (g)	70-80	70-85	45
Egg colour	White - Rose	White - Rose	Reddish



Figure 8. Ermellinato di Rovigo turkey

Activities and Conservation Scheme in Co.Va. Project

The breeding activities and conservation scheme were developed at the same time and in the same manner in all flocks. The reproduction season starts in February and birds are hatched from April to June. In October, new males and females are selected according to the breed standard for use in the next season. Near the end of each year, birds are vaccinated and weighted and a

blood sample is taken for AFLP (amplified fragment length polymorphism) analysis. In January, males of each breed are rotated among the flock. The aims of the conservation scheme established by the Department of Animal Science of the University of Padova were to increase the numbers of purebred animals of each breed and to maintain heterozygosity in populations by using the results of the AFLP analysis. Thus this is an *in-situ* conservation scheme that uses both traditional and molecular instruments. At the start of the



Figure 9. Comune Bronzato turkey.



Figure 10. Camosciata guinea fowl.

reproduction season, 34 pure females and 20 males in each flock represent each breed. Males are divided in two different groups on the basis of family relationships and AFLP analyses, and these two male families are rotated among the females groups.

Conclusion

Conservation of the local Veneto avian breeds could have a positive impact on the rural economy in some marginal agricultural areas of the region. The preservation of these local genetic resources will provide for their use in educational programmes that could both highlight a conservation point of view that builds upon the cultural legacy of each town, and also offer urban consumers a source of high-quality products.

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