

2. STATE OF KNOWLEDGE AND NEEDS ANALYSIS

2.1 State of the art

At the beginning of the 1900s, poultry production was based on the peasant farming of the many local varieties available in the territory, which constituted an important genetic heritage capable of providing products in a "poor" farming situation without any type of specialization, both in terms of structures and feeding. The texts of the time indicate that the national poultry stock, estimated at 45 million heads, was able to provide an annual product worth 380 million lire, intended for both domestic consumption and export. Despite the economic relevance of the sector, the improvement of poultry farming and production was supported only by private initiatives, and among these, the initiative of the accountant Isidoro Bianchi, who owned a villa in Milan, the garden district under construction on the outskirts of Milan, was described in the poultry farming manuals of the time as one of the few significant and noteworthy initiatives (Trevisani, 1919; 1921).

Accountant Bianchi had quickly selected a new breed, named Milanino after the garden district, which had spread widely in the villas of the Milanese municipalities to obtain poultry products for family self-consumption and local markets. The favorable productive characteristics of the breed had favored the development of a rational and profitable poultry farming; together with Valdarno, Livorno, Siciliana and Padovana, the Milanino breed was among the breeds considered at the time the aristocracy of Italian chickens, i.e., those indicated as the most suitable for production because they could combine excellent meat quality with high fertility, as well as precocity and hardiness of young birds. Italian poultry production continued to be based on rural farming of local genetic resources until the end of the 1940s, and the Milanino breed was still included in the list of the main Italian breeds of chicken with good productive aptitude for both eggs and meat, although its diffusion was limited almost exclusively to the Milanese territory of origin (Cortese, 1945). In the following years, intensive poultry farming began to develop, and Italian chicken breeds were quickly replaced by modern commercial hybrids, which were decidedly more productive. Autochthonous breeds were completely excluded in a short time from livestock production, and many of them became extinct, as was the case with the Milanino breed (Zanon and Sabbioni, 2001). Due to its disappearance from the territory, the Milanino breed was not included in the Poultry Genealogical Book established in 2014 by the Italian Ministry of Agricultural, Food and Forestry Policies (MIPAAFT).

Following the interest and support of local public institutions, the proponent of this project initiated and developed a program for the recovery, conservation, and valorization of the Lombard Milanino breed starting from 2010. The breed specimens were selected and constantly bred at the zootechnical facilities of the University of Milan, where a breeding nucleus is maintained according to the in situ conservation technique. Studies conducted in recent years (Strillacci et al, 2017) have shown the existence of genetic and genomic variability in the Milanino breed, which makes its conservation and use in breeding desirable. The morphological and genetic characteristics typical of the breed make it an objective example of biodiversity conservation in the poultry field, aimed at protecting a genetic potential adapted to free-range and extensive farming systems, useful for

developing circular productivity projects to rebuild the relationship between humans, livestock production, and the land.

The poultry sector is currently undergoing a new period of transformation, moving from an intensive and standardized production system to a sustainable and diversified one. Consumers are increasingly interested in higher ethical and health value productions, and in recent years the trend towards alternative productions (outdoor, organic) has been on the rise. The objectives of the current European rural development policy are aimed at further expanding this trend. Additionally, in the egg production sector, small-scale farms with less than 250 birds are now a significant production reality, representing 31% of all farms (Ismea, 2020).

Rural farming systems should not use genetically selected hybrid breeds for rapid growth, as they are characterized by low adaptability to the natural environment. The EC Regulation 889/2008 for organic farming provides that, regarding the origin of animals, preference should be given to autochthonous breeds, which can efficiently adapt to extensive outdoor grazing farming conditions. Autochthonous breeds, given their intrinsic robustness, would be the best choice to use in outdoor farming systems, which are now considered an alternative to intensive farming. However, it is currently difficult to find poultry products from local breeds on the market, both because they are strongly tied to territorial production and because they are not very consistent and have limited diffusion. Moreover, knowledge about the typical characteristics and performance of local breeds is very limited, and therefore, it is not easy to efficiently raise these animals.

The main objective of this project is to improve the knowledge and management of the population of Milanino breed currently available. The expected results are essential to consolidate the conservation activity, identify productive directions, and promote the zootechnical valorization of the breed in the Lombardy region. The project involves several actions aimed at monitoring the population structure, improving the reproductive and productive management of the population, as well as a direct diffusion action of animals in the territory. The project results will benefit the Lombardy agricultural sector for the creation of local supply chains capable of recreating a close link between the native breed, the territory, and derived products such as meat and eggs.

Bibliographic references

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