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A survey of farming the Black Sicilian pig in the Nebrodi mountains

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SUMMARY - The Black Sicilian pig, despite its reduction in size over the last years, still has by comparison to other local Italian pig breeds a certain farming importance. The breed is today farmed with extensive or semi-extensive systems in the Nebrodi mountains, Sicily. The survey suggests the presence of 500-600 sows and 100-130 boars with good breed characteristics. Sixty-six farms were surveyed, with a mean surface of 165.7 ha and 8 sows on average (range 1-33). Age at first parturition is 10.5 months, reproductive carrier is of 6.3 years for sows and 3 years for boars, weaned litter size is 7.7. Age (7-18 months) and weight (50-120 kg) at slaughter show high variability. It is urgent to develop management programmes, including marketing of niche products, in order to halt breed decline.

Key words: Local breeds, Black Sicilian pig.

RESUME - "L'élevage de la race porcine Nero Siciliano sur les monts Nebrodi". Le porc noir sicilien, par rapport aux autres races porcines italiennes, bien qu'ayant, dans les dernières années, une forte réduction, est encore très important dans la zootechnie. Aujourd'hui l'élevage du porc noir sicilien est effectué en Sicile autour des Monts Nebrodi avec des systèmes extensifs et semi-extensifs. Cette recherche a identifié 500-600 femelles et 100-130 mâles, avec les caractères de race. On a recensé 66 élevages, chacun avec une moyenne de 8 femelles (int. 1-33) dans une surface de 165,7 ha environ. L'âge à la première mise-bas est de 10,5 mois, la vie reproductive est de 6,3 ans pour les femelles et de 3 ans pour les mâles, tandis que le nombre des porcelets sevrés par mise-bas est de 7,7. Une forte variabilité a été mise en évidence pour ce qui concerne l'abattage effectué à l'âge de 7-18 mois et avec un poids de 50-120 kg. Pourtant pour sauvegarder le porc noir sicilien il est absolument nécessaire d'effectuer des propositions concrètes en relation aux programmes d'élevage et à la valorisation des produits typiques.

Mots-clés : Race locales, porc noir sicilien.

Introduction

The Black Sicilian pig, which is today only famed in the Nebrodi mountains, in Sicily, until a few years ago was distributed over a larger area, which included the Madonie mountains. The current farming area (800-900 sq km), between "Finale di Pollina" and "Capo Tindari", is delimited North by the Tirreno sea and South by the Alcantara and Simeto rivers. These mountains, with a maximum altitude of 1,847 meters above sea level, are characterized by valleys which gradually slope to the coast. The region is covered by woods and wide pasturelands; cork, oak, and beech are the predominant trees. The Black Sicilian pig morphologically presents: black coat, mane, height at wither of 60-65 cm, sometimes wattles from the angle of the jaw, thin and lengthened snout, little ears, short abdomen, long and strong legs with resistant hooves. Animals show high rusticity and disease resistance, are good walkers and grazers, capable to use poor food and to adapt to harsh climate conditions. For these reasons, despite the presence in the area of more productive commercial breeds, farmers continue to keep the Black Sicilian pig. However, in the last decades, boars of several commercial breeds were used and today part of the population shows evidence of crossing. In these areas, since a long time extensive and semi-extensive pig farming is a complementary activity to cattle and sheep breeding. Sows are kept in the farm only during parturition and weaning to avoid losses from predators. Boars are generally free ranging in the woods and only occasionally are kept at the farm centre. Today the Black Sicilian pig population is progressively decreasing because uncontrolled crossbreeding and abandoning of farming in the more difficult

areas. It is then urgent to better understand breed performance and farming systems in order to develop management programmes and to halt and possibly reverse breed decline. Little information is available on farming the Black Sicilian pig. This paper reports the results of a first field survey.

Materials and methods

Data were collected during a field survey in 1991, by the local offices of the Agriculture and Forestry Administration, in 20 communes, representing the major part of the current farming area of the Black Sicilian pig. Data included: racial composition of the herds, farming and production systems, productive and reproductive performance. Descriptive statistics were computed and the effects of several factors on the racial composition of herds were investigated.

Results and discussion

Sixty-six farms with Black Sicilian herds were surveyed. In traditional farming, from April-May to November-December, animals are moved to summer pastures; for this reason 41% of the surveyed farms have two farm centres. On average, the total area of the farm is 165.7 ha (± 214.4), covered for the 78% (± 3) by woods. Sixty-four percent (± 4) of the farm area is rented, the remaining part is owned (34%; ± 4) and a small proportion is communal pastures (2%; ± 1). The region is characterised by inclines, which slope from the Nebrodi mountains to the sea. Mean altitude is 916 m. (± 373). Excluding pigs of commercial breeds (i.e., a total of 2 boars and 15 sows), 119 boars and 690 sows were counted. In the average herd 68% (± 4) of sows show good breed characteristics, the remaining 32% presents evidence of crossing with commercial breeds. Among boars the percentage of animals with good breed characteristics is 73% (± 4). Numbers, per farm, of sows and boars with good breed characteristics (Black Sicilian pig) are respectively 8.1 (± 7.9) and 1.5 (± 1.7) (Table 1).

Table 1. Size of herds[†]

	Mean \pm SD	Range
Total no. sows	10.4 \pm 8.7	1-40
Total no. boars	1.8 \pm 1.7	0-11
Black Sicilian sows	8.1 \pm 7.9	0-31
Black Sicilian boars	1.5 \pm 1.7	0-11

[†]Excluding pigs of commercial breeds

Fourteen farms do not own boars and their sows are mated to free ranging males which property is unknown. Herd size and altitude of the farm centre do not affect the percentage of Black Sicilian sows in the herd. High significant differences in the percentage of Black Sicilian sows are observed among communes (0-96%). The distribution of the number of months-head per commune is not homogeneous, with a mean of 526.9 (± 688.4). Two communes, Tortorici and Caronia, present a number of months-head higher than 2,200. Within commune, the number of months-head kept in the woods, per farm, is 127.7 (± 111), while in other areas (cultures) is 54.9 (± 45), corresponding to respectively 85% and 15%. Usually (77%), farming the Black Sicilian pig is complementary to cattle and sheep breeding. Feeding is based on grazing, mainly in oak, beech, and chestnut woods. Whenever natural food resources do not meet basic nutritional requirements, grazing can be integrated with little amounts of broad bean, grain, and bran. Reproductive carrier (Table 2) starts on average at 6.7 (± 1.0) months of age. Sows are kept for breeding on average for 6.3 (± 1.9) years, boars for 3.1 (± 1.6) years. Sows give birth on average twice per year. Weaned litter size is 7.7 (± 2.1). No statistical differences of litter size were found between the first and later parities. Fattening pigs, both males and females, are castrated at three months of age.

Pigs are slaughtered during the winter. Because births occur during the entire year, age (11.3 months; ± 2.6 ; range 7-18) and weight (50-120 kg) at slaughter show high variability (Table 3).

Animals kept with the extensive system are captured by means of fences and trained dogs. Sows, at the end of the carrier, weight on average 129.5 (± 23.4) kg, boars 142.6 (± 27.5) kg. Products are usually sold directly to consumers (96%) (Ioppolo *et al.*, 1991).

Table 2. Reproductive parameters

	Mean \pm SD	Range
Age at first bred (month)	6.7 \pm 1.0	4-9
Boars carrier (year)	3.1 \pm 1.6	1-10
Sows carrier (year)	6.3 \pm 1.9	3-10
Weaned litter size	7.7 \pm 2.1	3.5-15
Age at castration-males (month)	2.9 \pm 1.7	1-12
Age at castration-females (month)	3.1 \pm 1.1	3-6

Table 3. Productive parameters

	Mean \pm SD	Range
Age at slaughter (month)	11.3 \pm 2.6	7-18
Weight at slaughter (kg)	83.1 \pm 16.3	50-120
Sow weight at the end of carrier (kg)	129.5 \pm 23.4	80-180
Boar weight at the end of carrier (kg)	142.6 \pm 27.5	100-180

Conclusions

This survey suggests the presence on the Nebrodi mountains of a Black Sicilian pig population of about 500-600 sows and 100-130 boars. In addition, a crossbred population of approximately 250-300 sows and 30-40 boars is estimated. It is still difficult to estimate the additional number of free ranging animals which completely avoid farmer control. Major threats to the Black Sicilian pig are the ongoing uncontrolled crossing with commercial breeds and risk of the arrival in the farming area of the wild boar, recently introduced in neighbouring areas. Farming this breed seems still to allow reasonable incomes at almost null costs. However, in order to interrupt and reverse the ongoing breed decline it is urgent to increase the economic competitiveness of the breed by improving its production system and by developing niche market products. In this direction, several research programmes have been recently started.

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