

## The Black Alpine Pig – Rescue and Breeding

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\*“Pro Patrimonio Montano” covers as an Alpine Network four countries (AT, CH, DE and IT). It is active in mountain farming of rare and remarkable, autochthonous animal breeds.

Website: [www.patrimont.org](http://www.patrimont.org).

### SUMMARY

All breeds not meeting the new standards of performance disappeared. This was especially with pigs. Until recently everybody was convinced of the total loss of all autochthonous Alpine pig breeds! But in 2013 representatives of the Veterinary Faculty at Parma University found in a School Farm one last group of Valtellina pigs (also called Grison pig). The Alpine Network Pro Patrimonio Montano\* continued the breed and found after extensive search tours two other relict groups to include and avoid inbreeding. The three provenances form today a *gene pool*, representing all alpine pig breeds. Three years after, there are again 73 breeding animals in 27 breeding groups in three countries. Earlier the black and spotted Alpine pigs were spread in the mountains of central and south-eastern Alpine regions from Switzerland to northwest Slovenia. Yet, no scientific data are available, but studies are currently undertaken.

### ADDITIONAL KEYWORDS

Alps.  
Mountain farming.  
Alpine pasturing.  
Meat quality.

### Il Suino Nero delle Alpi – Salvataggio e Allevamento

### SOMMARIO

Tutte le razze minori che non possono garantire certi standard produttivi sono scomparse. Ciò è accaduto in particolare nell'ambito suinicolo. Fino a poco tempo fa erano tutti convinti della completa perdita di tutte le razze suine alpine autoctone! Ma nel 2013 alcuni ricercatori della Facoltà di Medicina Veterinaria di Parma hanno trovato, in una fattoria didattica, un ultimo gruppo di maiali Valtellinesi (chiamato anche maiale Grigione). La rete alpina Pro Patrimonio Montano\* ne ha continuato l'allevamento e ha trovato, dopo intense ricerche, altri due gruppi residui da includere ed evitarne la consanguineità. Questi tre gruppi, con diversa provenienza, costituiscono oggi il pool genetico che rappresenta tutte le razze suine alpine. Dopo tre anni, sono presenti 73 animali, distribuiti in 27 allevamenti, in tre diversi Paesi. Storicamente, il suino Nero delle Alpi, sia quello con la cute e setole nere sia quello a macchie, era diffuso tra le montagne delle regioni centrali e sud-orientali delle Alpi Svizzere fino a nord-ovest della Slovenia. Ad oggi, non sono ancora disponibili dati scientifici che riguardano questo suino, ma sono in corso alcuni studi.

### PAROLE CHIAVE AGGIUNTIVE

Alpi.  
Allevamento di montagna.  
Pascolo alpino.  
Qualità della carne.

### INFORMATION

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### INTRODUCTION

Once, each region – especially in the Alps – had its own locally adapted breeds. These belonged (as with their building style) to their cultural heritage. Cross-breeding and performance driven breeding has displaced these breeds in the last 80-90 years. Unlike sheep, where many traditional breeds were conserved, the loss in the pigs was dramatic. Today there are almost only the standard, pink pigs. This has also led to a radical change to the Alpine pasturing of pigs. Due to

their physique (short-legged, long and heavy body) the modern performance breeds are not suitable for grazing mountain pastures. The pink animals with their lack of skin pigmentation cannot tolerate the strong UV light of the Alps. They very quickly develop sunburn, which can be dangerous. They must be protected from weather changes, large temperature differences and rapid climate change in the harsh alpine climate. The modern animals often are taken along to the cow-alps to consume whey from cheese-making, but they are mostly kept in sheds and fed with additional cereals.



**Figure 1.** Black Alpine Pig (Suino Nero delle Alpi).

They do not have much in common with the original, extensive grazing pigs. The previous Alpine pig breeds were dark in colour, had a dense bristle dress and a thicker skin. They were thus sunburn resistant and particularly adapted to the extreme weather conditions in the mountains. They were used in free-range systems. As extensively held grazing pigs they adapted to life on mountain pastures. The old breeds were not only whey users, but also ate the roughage on inferior pastures. They represented a cultural good and also had an immense importance for the economy and ecology of the Alps. Earlier they were spread in the mountains of central and south-eastern Alpine regions from Switzerland to northwest Slovenia. Until recently, the total loss of all breeds of the Alpine pig was believed as sure.

#### DISCOVERIES

At the end of May 2013, Dr. Alessio Zanoni from the Veterinary University of Parma and pig expert of the Italian organization for the conservation of endangered livestock breeds (R.A.R.E.), informed the European SAVE Foundation that a group of small, black Valtellina pigs had survived in a Fattoria Didattica (didactic farm), but were unfortunately very endangered. He asked to undertake conservation measures (Valtellina pigs are identical to the earlier Grisons pigs in Switzerland). In the knowledge that a breed can be extinct before all the animals are dead, the Network "Pro Patrimonio Montano" (for old Alpine breeds)

spontaneously took over animals and is now building up the breed. Since the Valtellina pigs are the last real Alpine pigs and are differentiated from the larger, also almost extinct pigs in the Po Valley (Mora Romagnola, Nero di Parma), at least the ecotype of this mountain pig should be conserved. In this ecotype other relics of the pigs of the southern Alpine region should be merged as the last few black Valtellina pigs cannot survive as a breed on their own due to inbreeding. Since then, numerous targeted search tours have been carried out, especially in remote areas where the old breeds have been kept for a longer time. Meanwhile, two other relict populations of black and spotted Alpine pigs were found, namely the pied Samolaco and the spotted South Tyrolean pigs. The project brings them together in a gene pool and conserves them together. Since they are all black or black-spotted animals, breeding takes place under the name "Black Alpine pig", a name that was already used in old literature for the community of black Alpine pigs (e.g. JR Steinmueller, 1827). The Black Alpine pig is now a composite breed, but is based on actual remains of Alpine breeds. The project aims at a marketable animal that provides an opportunity for a sustainable Alpine farming again.

**Table I.** Characteristics of the Black Alpine pig (Caratteristiche del suino alpino nero).

Morphology	small to medium-sized pig with long, strong legs and short torso. Therefore, very consistently mountain
Colors	from black through spotted to dark red
Weights	sows: 130-160 kg, boars 150-180 kg
Productivity	2 litters per year with 8-12 piglets. Late maturity
Husbandry	undemanding breed, ideally suited for extensive free-range farming

#### CHANCES FOR SUSTAINABLE ALPINE FARMING

The Black Alpine pig represents a pig that can be raised on the Alp and is a robust, pasture animal, as was common in the Alps before the promotion of high-input performance breeds. In an alp season of about 90-100 days, the pigs took advantage of the large diversity of mountain grasses and herbs. The nutrient-rich, aromatic plants (e.g. mountain plantain, alpine meadow-grass, thyme, yarrow, etc.) gave the meat of the pig a unique taste that is label-worthy today. The inclusion of green fodder on the alp enriched in the meat with the valuable omega n3 fatty acids, which are missing in modern pork. Due to the constant movement of the animals and the slower growth by extensive farming, the meat was also more compact and the fat, as a flavour carrier, better distributed in the body (marbling). The old breeds also were characterized by great robustness, were used to life in the open field and needed therefore little care (and no medicines). The pigs can be kept in places that were nutritionally worthless to the cows where they graze the plants on the over-fertilized soils or cause by their digging a partial improvement of the pasture vegetation. Fields overrun with docks are often used for the feeding of the mountain pig (which are fought with chemicals today) and the pigs are allowed to freely dig in the ground (roots, mice, beetle-grubs).



**Figure 2.** Black Alpine Sow (Scrofa Nera delle Alpi).

Thus, the weeds are counteracted and the floor that was compacted by cattle hooves is loosened.

#### RESCUE AND BREEDING

The last Alpine pig breeds exist as part of the Alps unique agrobiodiversity, they are a genetic treasure that must be preserved for posterity. So the Alpine Network Pro Patrimonio Montano has taken over the last remains of the black and spotted breeds of Alpine pigs and continues the breeding. Breeding groups of one boar and one to three sows are given to interested mountain farmers, who are advised by the network, which is also running the herdbook. The project "Black Alpine Pig" aims to set the qualities of this type in a market niche. Products from extensive farming, traditionally prepared, with high taste qualities and regionally produced have a future and are marketed with special labels. The aim of the project is to breed grazing pigs that can be raised on the alp and have a moderate fat quantity. By mid-2016 there are again 27 breeding groups, 22 in the mountains of the provinces of Verona, Trento, Sondrio (Valtellina) and South Tyrol. Three in the Austrian Lungau and two in the Bavarian Berchtesgaden county. Four breeding groups are located in agro-tourist farms and are publicly accessible. The herd register of Pro Patrimonio Montano is with 73 animals, based on 4 boar and 8 sow lines. Search tours

to find additional relict populations shall further widen the genetic base for the breed.

#### CONCLUSIONS

This locally adapted Black Alpine pig breed gives a chance for a modern, extensive and sustainable alpine farming. By its light, strong body-building these pigs are best for mountain pastures. Thanks to their dark color, they don't risk sunburn and can - unlike modern breeds - be all day outside in the mountains. Its modesty and sturdiness are ideal for extensive free-range. With their rooting they fight monk's-rhubarb and loosen compacted soil by cattle. They are not only culturally, but also ecologically interesting. They are constantly on the move and put the fat into the muscle, which is a close-grained, marbled flesh with a good taste. Less achievement, but great quality!

#### SCIENTIFIC STUDIES

Yet, no modern scientific data are available, but studies are currently undertaken by the University of Milan (Italy), Department of Health, Animal Science and Food Safety (the studies are headed by Prof. Federica Bellagamba and Prof. Raffaella Rossi).

#### BIBLIOGRAPHY

- Anderegg, F 1898, *Illustriertes Lehrbuch für die gesamte Schweizerische Alpwirtschaft*  
 Cassella, P & Cassella, O 1880, *Manuale pratico per lo allevamento del maiale*  
 Jaritz, G 2014, *Seltene Nutztiere der Alpen – 7000 Jahre geprägte Kulturlandschaft*  
 Mascheroni, E 1927, *Zootecnia speciale, III. Suini*  
 Staffe, A 1913, *Verbreitung des schwarzen Landschweines der südlichen Ostalpen*  
 Steinmüller, JR 1827, *Naturgeschichte des gemeinen Schweines und der verschiedenen Racen der Schweiz; Neue Alpina*  
 Sturzenegger, R 1917, *Die Schweinezucht der Schweiz (Inaugural-Dissertation)*