In dairy sheep, selection for production, functional and health traits is expensive due to the increasing cost of large scale phenotype recording and the decreasing of public funding. In order to preserve the efficiency of the breeding scheme of Sarda breed and to implement new traits, often costly to record, a nucleus flock with around 850 ewes was constituted in Sardinia by the National Association of Sheep Breeders and Agris Sardinia. All ewes have been sired from the most representative AI rams used in the selected population and were genotyped with the OvineSNP50 Beadchip. The main production, functional and health traits are recorded and data used to produce genomic evaluation and fine mapping of QTLs. In this paper we present results of these two approaches for production traits. Discussion will focus on the potential impact of these strategies on the selected population of Sarda breed.