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Editorial

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Author for correspondence:
Iolanda Altomonte,
Email: altomonte@vet.unipi.it

Donkey milk can improve our health, and that's why we should increase donkey milk production

Iolanda Altomonte

Department of Veterinary Science, University of Pisa, Pisa, Italy

As a member of the *Journal of Dairy Research* Editorial Board I would like to draw the attention of JDR readers to the donkey milk sector in Europe and particularly in Italy. Although many of the donkey breed populations in Europe have been decreasing, in the last few years in my country we have seen an increase in the numbers of some breeds reared for milk production (chiefly Ragusana and Amiata) and in the number of donkey dairy farms. In addition, several investigations support the suggestion that donkey's milk could be useful in babies suffering from cow milk protein allergy (CMPA: Martini *et al.*, 2018*a*) and also later in life and in certain health conditions (e.g. elderly people, in cases of dyslipidaemias and obesity). Although there has been a rise in consumer interest about donkey milk, it is still a niche product, and its price is high (about 14 euros per litre for pasteurized milk). In my opinion we should try to increase the quantity of donkey milk on the market in order to reduce the price and promote the donkey milk sector.

Given the low udder capacity of jennies, the average milk yield is only about 1–1.5 l/d (Martini *et al.*, 2018*b*). I believe that the best way forward would be to select the jennies in terms of milk yield and quality, similarly to what has been done for the other dairy species. Donkeys seem to have a wide individual variability in productive traits and this feature is an opportunity for genetic selection. The selection could be focused on creating two genetic lines in relation to the milk fat content. Donkey milk is low in fat (lower than 1%), making it useful in hypocaloric diets, whereas a genetic line producing higher fat milk would be more suitable in the diet of non-weaned babies. Furthermore, we need to investigate the nutritional needs of lactating donkeys, and take into account that foals are naturally milk-fed on donkey farms. We also need to find an optimal management for their separation and weaning in order to increase the amount of milk that is collected for sale. Future production systems must to be able to combine profitability with the responsibility of protecting human and animal welfare, as well as the environment. Consumers in Italy often consider animal welfare as an indicator of healthier and tastier products, therefore, welfare aspects in dairy donkey farming are key for consumers looking for 'healthy and natural food'. Despite this, there are still only a few robust design studies on dairy donkey management and welfare. What do I expect for the near future? I look forward to seeing new investigations into dairy donkey genetic traits and farm management in order to increase donkey milk yield and improve milk production.

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