

## Water quality on small ruminants' dairy farms in Castelo Branco region

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The importance of providing quality water for cleaning milking machines and other equipment is perhaps one of the most overlooked factors in ensuring milk quality on most dairy farms. Water for cleaning in the dairy barn is used for different situations, including for the process of milking, which requires cleaning and disinfection of the milking equipment, the milking parlour, and the milk cooling tank. Many factors on dairy farms can contribute to contamination of the raw milk, and one of the major factors responsible for this contamination is the water used to clean the milking and storage equipment.<sup>1</sup>

The objective of the present study was to quantify the quality of water and identify the bacterial and chemical risk milk contamination linked to water quality used in several small ruminants' dairy farms in Castelo Branco region. So, between 2019 and 2021, A total of 50 water samples were collected from 39 farms in the region under study and analysed for various physical-chemical and microbiological parameters, according to the standard methods.<sup>2</sup> The water supply includes public water supply, but mostly, it was found that the source of water used in the farms studied came from wells and boreholes. The water samples were collected as “point-of-use” samples, meaning that each sample was taken from a tap or water hose. Water used for this purpose should meet the requirements of at least drinking water quality, so the results were compared with the prescribed limit of the current legislation for drinking water (Decree-law 152/2017 of December 7). There were variations in the quality of water from different sources, and from similar sources, but the results obtained showed that, regardless of origin, the physicochemical parameters met the quality criteria required by Portugal standard. However, only 40% of the samples proved to have microbiological quality, which suggests the need for improvements in obtaining water that will not be a source of microbiological contamination of raw milk.

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### References:

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