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WATER SOURCES IMPLICATION IN DIFFERENT DAIRY COW DIETS

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The earth's freshwater resources are endangered by excessive consumption of water use and pollution. Until now, issues of freshwater availability, use and management have been addressed at a local, national and river basin scale. In all production processes, freshwater supplying is measured in terms of consumed water volumes (evaporated or incorporated into a product) or polluted per unit of time. The agriculture account is 92% of the global freshwater footprint, and 29% of this amount is used in animal husbandry to produce forage, to mix animal feed, for drinking of the animals and, at least, in the farm activities. Freshwater consumption and pollution can be assessed using the water footprint (WF) concept. As described in literature WF is distinguished between green WF (consumption of rainwater), blue WF (consumption of surface and groundwater) and grey WF (surface or groundwater pollution). Two homogeneous groups of milking cows were used to compare two different diets: standard feeding (SF), with corn silage-based diet; alternative feeding (AF), with triticale silage-based diet. Both silages represented about 47% of diet composition. Whereas no significant differences were noticed between the groups on production level and on composition of milk, AF showed the lowest water consumption: -0.58% in green WF, -6.98% in blue WF and -44.21% in grey WF.