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A survey on feed autonomy in dairy buffalo farms in southern Italy

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This study aims to generate reference values for feed autonomy in dairy buffalo farms located in the PDO mozzarella-producing area. Between June and December 2024, twenty commercial dairy buffalo farms were surveyed. Farmers were interviewed using a questionnaire covering herd characteristics, milk yield, and general management practices, as crop production and feeding strategies. For each crop, dry matter (DM) production was assessed in terms of both quantity and nutritional value. Feed autonomy (FA) was determined as the proportion of self-produced DM consumed relative to the total DM intake at the herd level. Additionally, energy feed autonomy (FAe) and protein feed autonomy (FAp) were calculated by multiplying the amount of consumed DM by its energy and crude protein content for both purchased and self-produced feeds. The collected data underwent descriptive statistical analysis. The farms surveyed had an average usable agricultural area (UAA) of 25 ha, entirely devoted to forage production. Maize silage, often grown in rotation with winter grasses – either as pure crops or in legume mixtures – is the predominant forage. Regarding herd composition, an average of 337 (±188) animals was recorded per farm. The average milk yield per cow was 2.395 ± 275 kg. Consequently, the average stocking rate was 19 ± 17 heads per ha of UAA. Regarding feeding practices, 35% of farms relied exclusively on hay as their forage source, while the remaining farms used varying proportions of maize silage and hay. Compared to herd requirements, 85% of the forage and 100% of the straw and concentrate feed were purchased externally. As a result, the average FA level was estimated at 15%, ranging from 2.5% in dry herds to 23% in lactating herds. Expressed in terms of consumed energy, FAe was 14%, while FAp was slightly lower at 12%. Our preliminary findings reveal a significant dependence on off-farm feed in dairy buffalo farming, with limited forage self-sufficiency and high stocking densities indicating that scarce arable land is a major challenge to economic and environmental sustainability.

Livestock and orchard farmers perceptions on the impact of grazing in almond and olive fields

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In rainfed tree crops such as almond and olive orchards, livestock grazing on sown or spontaneous vegetation cover as an alternative to tillage is beneficial for soil structure and fertility, supports feed autonomy for the flock and promotes circular economy. To assess its potential interest, the perceptions and attitudes of farmers, livestock breeders and advisors towards this practice were analysed through direct surveys (n=71) conducted in Teruel (Spain). The questionnaire addressed farm structure and management, the perceived benefits and drawbacks of livestock grazing on orchards and its effects on the use of inputs. Respondents were fruit growers (40%), mixed farmers (21%), livestock breeders (4%) and advisors (35%). Most farmers cultivated both almond and olive orchards (47%), whereas mixed and livestock breeders were mostly sheep farmers (57%). Only 51% of fruit farmers had previously used cover crops, but up to 80% were favourable to using them and allowing grazing by livestock, preferably sheep. Current users managed them by mechanical mowing (65%), grazing (33%), or cutting and leaving them on the ground as mulch (30%), rarely using herbicides (7%). Respondents considered grazing to be slightly to highly beneficial for multiple agronomic, environmental and social aspects. However, fruit farmers were more sceptical than livestock breeders regarding young tree survival (57% rated it as slightly to highly detrimental), tree productivity (18%), pest control and soil quality (11%). Grazing was considered to reduce herbicide (87%), fuel (74%) and fertilizer (67%) use, reduce (29%) or maintain machinery requirements (47%), but increase fencing needs (37%). While opinions were divided regarding the impact on labour for livestock breeders, orchard farmers believed it would reduce labour demands (60%). Overall, strong support was shown for grazing cover crops in tree fields, with greater perceived benefits for livestock breeders, suggesting that familiarity with mixed farming systems positively influenced their assessment. The reduction in reliance on inputs highlights the sustainability of this practice that enhances economic and environmental efficiency while alleviating labour demands.