Managing Feed Use Efficiency in Peri-Urban Dairy Herds in Pakistan

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Introduction

Goal: Evaluation of existing husbandry practices to optimize feeding and resources use efficiency

Approach: 12 months monitoring of feeding, milk offtake and live weight development of cattle and buffaloes

→ Comparison: of feed offer with performance-based energy requirements

Methodology

- 12-month monitoring of feeding, milk yield and live weight development of cattle and buffaloes on 15 mixed farms
- Farm types were semi-commercial small-scale mixed (SSM), semi-commercial small-scale dairy (SSD) and commercial small-scale dairy (CSD); mainly stall feeding
- Regularly collected samples of feeds offered were analysed for their nutrient composition

Results

- Offered feed dry matter, protein and fibre differed (P<0.05) between the production systems and seasons
- Offer of metabolisable energy (ME) was similar for the three production systems (P>0.05) in all four seasons
- Daily milk yield (corrected to 4% fat) was 13.5 L in buffaloes and 8.1 L in cattle. Milk offtake from buffaloes was higher in spring and hot summer (P<0.05).
- A lactating buffalo was exposed to a daily ME deficit of -7.0 MJ and -8.5 MJ on SSM and CSD farms, and to a balanced energy supply (+1.7 MJ) on SSD farms

Conclusions

- Undersupply of feed and nutrients to high producing and oversupply to low producing dairy animals
- More efficient feed utilization is possible through separate feeding of physiologically homogenous groups of buffaloes and cattle, according to requirements