Analysis of milk production systems and its implications for sustainable intensification of smallholder dairying in Ethiopia, SSA

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The rapidly growing demand for livestock products in developing countries provide unique opportunities. However, to be competitive in future, smallholder livestock production will need to intensify and be able to provide higher value products. Intensification of livestock production is widely promoted in to meet increasing demand for livestock products. The key livestock development challenge remains, determining how to generate productivity growth while improving the efficient use of land and water resources. However, little is known of how dairy intensification driven by socioeconomic issues and dairy development efforts works as well as the challenges of changing production systems. Thus, this paper synthesizes information based on literature review and Ethiopian dairy farming as a case study to describe livestock intensification (productive livestock rearing, forage production and manure management) and options to enhance sustainability. The analyses revealed that herd size, farmland size, dairy training, and cooperative membership had significant effects on cultivating improved forages. Dairy production system, dairying experience, and herd size were significantly associated with rearing only crossbred dairy cows. Farmland size, dairy system, and awareness of manure handling were significantly associated with practicing good manure management. The major challenges encountered by dairy farmers were shortage of concentrate feed and water, and improved breeding, milk marketing, health of dairy stock, manure disposal and milk safety. Thus, production systems–based dairy breeding and manure management, related input supply, and alternative formal marketing options are the key attributes of the intensification and improved productivity of smallholder dairy production.

Keywords
Intensive dairy production, farm characteristics, sustainable dairying, smallholders, challenges

Biography

Habtamu has completed his PhD at the age of 40 years from Addis Ababa University. His PhD focused on Smallholder based sustainable dairy intensification: production systems and dairy foods perspective. He is an Asistnt professor of dairy science and invloved in teaching/learning, rsearch and counity service in Wolaita Sodo univeristy, Ethiopia. He has published more than 17 papers in reputed journals. His research interests cover in the areas natural/life sciences including Farm/food animal biology and performance, dairy farm management/ practices, milk quality management, role of dairy production in food and nutrition security, and sustainability of production systems/dairy systems analysis/value chains.

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