



BRIDGE+

Factsheet for WFD session Smart Dialogue for Sustainable Livestock

The BRIDGE (Building Rural Income through Inclusive Dairy Business Growth in Ethiopia) project - implemented by SNV Ethiopia and Wageningen UR - has created substantial impact on the targeted dairy farming households, reaching 82,000 farming households.

The Dairy Sector in Arsi, Ethiopia

Sustainability assessment at regional level

The dairy sector in Arsi is predominantly made up of smallholder farmers with mixed farming systems, combining crop and livestock production. Using community grazing systems, these farmers mainly keep cows of local breed(s) and use crop residues as the main source of animal feed. However, there is a gradual shift towards modernization, with increasing adoption of exotic breeds using artificial insemination, and enhanced feeding practices such as silage. Infrastructure developments, including milk collection centres and cooperatives, are improving market access and reducing losses. Despite challenges such as market volatility, lack of knowledge, and poor rural infrastructure, government support and NGO involvement are driving positive changes. Efforts are also being made to promote sustainable practices and climate change adaptation, addressing environmental concerns, such as manure management and smart feeding practices. Rising urban demand for dairy products presents a significant opportunity for growth in the dairy sector in Arsi.

Soil health: The Arsi area features fertile, clay loam and loamy soils rich in **organic matter**, making them ideal for agriculture and dairy farming. However, due to intensive agricultural practices the organic matter in the soil has been decreasing. The soils in Arsi typically have slightly acidic to neutral pH levels and good nutrient retention. However, challenges like **soil erosion** due to poor soil management, waterlogging in low-lying areas, and degradation from overgrazing and deforestation persist.

Resource use and environmental impact: The dairy sector in Arsi significantly impacts resource use and the environment. It requires a substantial amount of water for cattle and feed production, extensive amount of land for grazing, and the use of crop residues like feed source often lead to soil degradation and competition with other agricultural activities. **Greenhouse gas emissions** (amounting to >17 kg CO₂ eq/kg FPCM), methane emissions, water pollution from runoff, and biodiversity loss due to habitat encroachment are notable environmental concerns.

Access to production factors: Farmers have moderate access to land and water resources, which are essential for grazing and feed production. However, access to quality inputs such as improved cattle breeds and veterinary services, as well as **feed availability** is often limited and costly. Financial constraints and lack of **access to credit**, resembled by high interest rates together and lack of financial knowledge, hinder the ability of many smallholders to invest in necessary resources and technologies. Additionally, infrastructure limitations, such as poor road networks, impede efficient market access and distribution.

Profitability: The dairy value chain, encompassing production, processing, and marketing stages, offers promising margins. Nevertheless, these profits, are contingent on efficient access to inputs and markets, thereby defining **farmers gross income**. Mixed farming systems provide a diversified income stream, offering more stability and resilience, however

other agricultural practices are often more profitable. Several challenges such as high feed costs, coupled with land scarcity and limitations in feed quality and availability, pose substantial hurdles. Inadequate extension and veterinary services further complicate efforts to optimize production efficiency and mitigate risks. Improved crossbred cows yield three times higher revenue compared to local breeds, with manageable operating costs. Market access and proximity significantly influence farm productivity and commercial engagement. Farm gate prices of milk in Arsi are often 50–60% lower than the retail prices consumers pay. Remote farms often contend with lower productivity and market participation, due to limited and fluctuating market demand, emphasizing the importance of proximity to viable markets for **acceptable and competitive animal product prices**.

Competition for land use between human food and animal feed:

Competition for land use between human food production and animal feed is a significant challenge exacerbated by population growth and environmental pressures. Arsi's agricultural landscape is predominantly smallholder-based, with subsistence farming practices often prioritizing staple food crops like maize, teff, and barley for human consumption. However, increasing demand for animal feed, strains available land resources as a small degree of arable **land is used for forage or grazing whereas it could also be used for food**. This competition is intensified by factors such as soil degradation, climate variability, and limited access to irrigation, which restrict agricultural productivity and exacerbate food insecurity.

Access to markets and services: While there are local markets and cooperatives for milk collection, many farmers face obstacles such as inadequate transportation infrastructure and limited access to processing facilities. This restricts their ability to **access output markets** and obtain fair prices for their products. Lack of market information and financial services further complicates matters, hindering farmers' capacity to make informed decisions and invest in their operations. Initiatives promoting cooperative marketing, improved market linkages, and access to market information are essential to enhance profitability and resilience among dairy farmers.