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Ethiopia: Herding a Sustainable Future

The morning should begin with fresh milk. Instead, a smallholder farmer in rural Ethiopia finds that his family's only dairy cow struggles to stand. A preventable parasitic infection has weakened the animal, but the nearest veterinary worker is hours away, and the farmer has never been taught to recognize the early warning signs. Within days, milk production stops. The family loses both a nutritious source of food and one of its only reliable sources of income. Across Ethiopia, millions of rural households face similar challenges. Although Ethiopia has one of the largest livestock populations in Africa, preventable disease, limited farmer education, outdated management practices, climate-related pressures, and inadequate veterinary services continue to limit livestock productivity (Food and Agriculture Organization [FAO], 2023; World Bank, 2023). Livestock–including cattle, sheep, goats, and camels–are far more than mere animals; they provide milk, meat, transportation, draft power, and financial security for families who often have few other economic resources. When animals become sick or unproductive, households lose income, nutritious food, and the stability needed to withstand drought, rising food costs, and other hardships. Strengthening farmer education while expanding access to sustainable livestock management, appropriate technologies, and veterinary support offers one of the most practical and lasting opportunities to improve food security and strengthen rural livelihoods throughout Ethiopia.

To understand the challenges facing Ethiopia's livestock sector, one must examine the country's geography, agricultural systems, and the role livestock play in rural livelihoods. Located in the Horn of Africa, Ethiopia is home to more than 120 million people, nearly 80% of whom live in rural areas and rely on agriculture as their primary source of income (World Bank, 2024; World Food Programme, 2025). The country's landscape ranges from fertile central highlands to arid and semi-arid lowlands, where frequent droughts, erratic rainfall, and land degradation place increasing pressure on agricultural production (Food and Agriculture Organization [FAO], 2023; USAID, 2022). Unlike commercial farms, most Ethiopian producers are smallholder farmers who cultivate only a few hectares of land while raising cattle, sheep, goats, or camels alongside staple crops such as maize, wheat, sorghum, and teff (FAO, 2023; McCann, 2017). For these households, livestock represent far more than a source of meat or milk; animals provide draft power for crop production, manure for soil fertility, transportation, household income, and financial security during periods of drought, crop failure, or economic hardship (International Livestock Research Institute [ILRI], 2025; FAO, 2023). However, inadequate rural infrastructure, limited market access, and inconsistent agricultural extension services make it difficult for many livestock keepers to adopt improved management practices or access the resources needed to increase productivity (Agricultural Transformation Institute [ATI], 2026; World Bank, 2024). Understanding these environmental, economic, and institutional conditions is essential because any sustainable solution must be practical for the smallholder farmers who produce the majority of Ethiopia's livestock and depend on healthy animals for both their livelihoods and their food security.

Despite livestock serving as the backbone of rural livelihoods in Ethiopia, productivity remains far below its potential because farmers face a combination of educational, veterinary, and environmental challenges

that hinder one another. Many smallholder livestock keepers rely on traditional knowledge that has been passed down through generations. Although this knowledge is valuable, changing climate conditions, emerging livestock diseases, and evolving production systems require additional training in animal nutrition, breeding, disease prevention, and sustainable herd management (Food and Agriculture Organization [FAO], 2023). While Ethiopia has expanded its agricultural extension system in recent years, many livestock producers—particularly those in remote pastoral and agro-pastoral communities—lack full access to practical, livestock-specific training and technical support (Agricultural Transformation Institute [ATI], 2026; International Livestock Research Institute [ILRI], 2025). Without consistent guidance, farmers often struggle to recognize disease early, provide balanced nutrition, or implement management practices that improve animal productivity.

These challenges are compounded by inadequate access to veterinary care. In many rural regions, veterinary clinics, vaccines, diagnostic services, and trained animal health professionals remain scarce, allowing preventable diseases and parasites to spread unchecked through herds (FAO, 2023; Community Animal Health Workers Technical Guideline, 2020). Poor animal health reduces milk production, slows growth, lowers reproductive success, and increases livestock mortality, directly affecting household income and food availability. At the same time, prolonged droughts, shrinking grazing lands, and increasingly unpredictable rainfall reduce access to nutritious forage and reliable water sources, placing additional stress on already vulnerable animals (USAID, 2022; USDA Climate Hubs, 2024). Together, these interconnected challenges create a cycle in which low productivity limits household income, preventing farmers from investing in better feed, veterinary care, or improved management practices. As livestock productivity declines, so does food security, demonstrating that strengthening Ethiopia's livestock sector requires solutions that address knowledge, animal health, and environmental resilience together rather than in isolation.

Recognizing the importance of livestock to both rural livelihoods and national food security, the Ethiopian government and international organizations have made significant investments to improve animal agriculture over the past decade. The Agricultural Transformation Institute (ATI) has worked to strengthen Ethiopia's agricultural extension system by expanding livestock advisory services and supporting more practical, farmer-centered approaches to education (ATI, 2026). Organizations such as the International Livestock Research Institute (ILRI) have partnered with local governments and communities to improve animal nutrition, breeding practices, and disease management while developing research-based solutions that are appropriate for Ethiopia's diverse production systems (ILRI, 2025). In addition, the Food and Agriculture Organization (FAO) has promoted Livestock Farmer Field Schools, which provide hands-on, community-based training that allows farmers to learn through demonstration, problem-solving, and peer collaboration rather than traditional classroom instruction (FAO, 2025). Ethiopia has also expanded the use of Community Animal Health Workers in remote pastoral areas, allowing trained local workers to provide basic veterinary care, disease surveillance, and farmer education where licensed veterinarians are often unavailable (IGAD, 2020). Together, these initiatives represent important progress toward improving livestock productivity and demonstrate a growing commitment to strengthening Ethiopia's agricultural sector through education, research, and community involvement.

Despite these promising initiatives, significant barriers continue to limit their overall impact. Ethiopia's livestock producers are widely dispersed across rural and pastoral regions, making it difficult for extension agents and veterinary professionals to provide regular, hands-on support to every community.

Limited funding, shortages of trained personnel, inconsistent coordination among organizations, and inadequate transportation infrastructure further reduce the reach of existing programs (ATI, 2026; ILRI, 2025). Although Farmer Field Schools and Community Animal Health Workers have demonstrated measurable success where they have been implemented, many smallholder farmers still lack consistent access to practical livestock education, preventative veterinary services, and continued technical assistance (FAO, 2025; IGAD, 2020). Rather than creating an entirely new livestock development program, Ethiopia has an opportunity to strengthen and connect these existing initiatives by expanding community-led education, improving collaboration among stakeholders, and increasing support for underserved rural communities. Building upon proven programs offers a more practical, cost-effective, and sustainable approach to improving livestock productivity while strengthening long-term food security.

Building upon existing livestock development initiatives, Ethiopia should establish a coordinated community-based livestock education network that expands successful programs already operating throughout the country rather than creating an entirely new system. Action based on this recommendation would strengthen collaboration among the Agricultural Transformation Institute (ATI), the International Livestock Research Institute (ILRI), Livestock Farmer Field Schools, Community Animal Health Workers, local universities, and regional agricultural offices to ensure that practical livestock knowledge reaches more rural communities. By integrating these efforts under a coordinated framework, farmers would receive consistent training in animal nutrition, disease prevention, breeding, record keeping, climate-resilient livestock management, and sustainable grazing practices while continuing to receive local support after formal training sessions conclude. Because this recommendation builds upon programs that have already demonstrated success in Ethiopia, it is both economically feasible and culturally appropriate. Rather than replacing traditional knowledge, it complements generations of farming experience with modern, science-based practices that help livestock remain healthier, more productive, and better-adapted to changing environmental conditions. Most importantly, empowering farmers with practical knowledge addresses the root causes of low livestock productivity, allowing improvements in animal health, household income, and food security to continue long after outside organizations have completed their initial support.

The creation of a Community Livestock Learning Network (CLLN)—a coordinated, community-based program designed to expand farmer education while connecting the country's existing extension services, Livestock Farmer Field Schools, Community Animal Health Workers, universities, and agricultural organizations–will build upon Ethiopia's existing livestock development efforts. Rather than replacing successful initiatives already operating throughout Ethiopia, the CLLN would strengthen collaboration among them, ensuring that practical livestock knowledge reaches more smallholder farmers in remote and underserved communities. Through this network, farmers would receive ongoing, hands-on training in animal nutrition, disease prevention, breeding, record keeping, pasture management, and climate-resilient livestock production. Training would be delivered through demonstration farms, local workshops, farmer discussion groups, and mobile outreach, allowing producers to apply new techniques directly within their own farming systems. By combining modern scientific knowledge with the traditional experience of Ethiopian livestock keepers, the network would create a practical and culturally appropriate approach that farmers can continue employing long after outside organizations have completed their initial support. Expanding access to consistent education empowers farmers to prevent problems before they occur,

improving livestock health, increasing productivity, and strengthening household food security in a sustainable and cost-effective manner.

The Community Livestock Learning Network (CLLN) would operate by strengthening and connecting programs that already exist rather than creating an entirely new agricultural system. Regional agricultural offices, the Ethiopian Ministry of Agriculture, the Agricultural Transformation Institute (ATI), the International Livestock Research Institute (ILRI), and Livestock Farmer Field Schools would work together to coordinate training throughout Ethiopia's major livestock-producing regions. Within each participating community, experienced livestock farmers, agricultural extension agents, Community Animal Health Workers, and veterinary professionals would serve as local mentors, delivering practical, hands-on instruction through demonstration farms and regularly scheduled workshops. Rather than relying solely on classroom-style teaching, farmers would learn by practicing improved feeding methods, recognizing early signs of disease, administering basic preventative care, maintaining simple production records, and implementing sustainable grazing strategies directly with their own animals. Training sessions would be adapted to local production systems and delivered in local languages to ensure they remain culturally appropriate and accessible. Because the network builds upon trusted local institutions and experienced community members, farmers are more likely to participate, continue applying new practices, and share their knowledge with neighboring producers. This community-centered approach allows education to spread beyond individual workshops, creating a lasting network of local expertise that continues improving livestock health and productivity long after outside organizations have reduced their involvement.

Implementing the Community Livestock Learning Network would require collaboration among government agencies, research institutions, nonprofit organizations, and the farming communities themselves. Ethiopia's Ministry of Agriculture would oversee the program by coordinating regional agricultural offices and integrating the network into the country's existing extension system. Organizations such as the Agricultural Transformation Institute (ATI) and the International Livestock Research Institute (ILRI) would provide technical expertise, training materials, and research-based livestock management practices, while the Food and Agriculture Organization (FAO) could continue supporting Farmer Field Schools that serve as local training centers. International development partners, including the World Bank and the International Fund for Agricultural Development (IFAD), could help fund expansion into underserved rural communities through grants that already support agricultural transformation and rural development. Local governments would identify communities with the greatest need, while Community Animal Health Workers and agricultural extension agents would provide year-round support after initial training sessions. Farmers themselves would become active stakeholders by participating in demonstrations, mentoring neighboring producers, and sharing successful practices within their villages. By building upon organizations and programs that are already operating in Ethiopia rather than creating an entirely new system, the Community Livestock Learning Network would remain financially realistic, culturally appropriate, and capable of expanding gradually as additional funding and local participation increase.

The Community Livestock Learning Network would produce both immediate and long-term improvements for Ethiopia's food system. In the short term, farmers would gain practical skills that help them recognize diseases earlier, improve animal nutrition, reduce livestock deaths, and increase milk and

meat production. Healthier animals would provide families with more nutritious food while also creating additional income through the sale of livestock and animal products. As household incomes increase, farmers would be better able to purchase quality feed, veterinary services, and improved breeding stock, creating a cycle of continued improvement rather than one of declining productivity. Over the long term, widespread adoption of sustainable grazing practices, improved herd management, and preventative animal healthcare would strengthen the resilience of Ethiopia's livestock sector against drought, disease outbreaks, and the growing impacts of climate change. Communities would become less dependent on emergency food assistance because stronger livestock production would provide more reliable sources of food and income throughout the year. By investing in education rather than relying solely on outside aid, the Community Livestock Learning Network would empower farmers to make informed decisions that continue benefiting their families, their communities, and Ethiopia's agricultural economy for generations.

Although the Community Livestock Learning Network offers a practical and sustainable approach to improving Ethiopia's livestock sector, several challenges could affect its implementation. Reaching remote pastoral communities remains difficult because many livestock keepers live far from veterinary clinics, training centers, and reliable transportation networks. In addition, securing long-term funding and maintaining farmer participation will require continued cooperation among government agencies, research institutions, nonprofit organizations, and local communities. However, these challenges can be reduced by building upon Ethiopia's existing agricultural extension system instead of creating an entirely new program. Mobile training teams, demonstration farms, and Community Animal Health Workers can bring education directly to rural communities, while partnerships with organizations such as the Food and Agriculture Organization (FAO), the International Livestock Research Institute (ILRI), the Agricultural Transformation Institute (ATI), and the International Fund for Agricultural Development (IFAD) can provide technical expertise and financial support during expansion. Encouraging experienced farmers to become local mentors also creates leadership within communities and allows knowledge to continue spreading after formal training has ended. Because the program emphasizes local ownership, practical skills, and collaboration with organizations already working in Ethiopia, it remains both culturally appropriate and financially realistic while increasing the likelihood of long-term success.

The morning should begin with fresh milk, not uncertainty. For millions of Ethiopian livestock keepers, the health of a single animal determines whether a family has nutritious food to eat, children can attend school, or another season is spent struggling to recover from preventable losses. Ethiopia possesses one of the largest livestock populations in Africa, yet its greatest resource will never reach its full potential without investing in the people who care for it. While expanding veterinary services, improving technology, and strengthening infrastructure are all important, lasting change begins with knowledge. By building upon existing agricultural extension programs through the proposed Community Livestock Learning Network, Ethiopia can provide farmers with practical training, local support, and the confidence to adopt more productive and sustainable livestock management practices. Adopting the above recommendations will strengthen initiatives already underway rather than replacing them, making it both feasible and culturally appropriate for rural communities. As healthier livestock lead to higher productivity, more reliable household income, and greater access to nutritious food, the benefits extend far beyond individual farms to strengthen communities and the nation's food system as a whole. Empowering farmers with the knowledge to care for their animals is ultimately an investment in Ethiopia's long-term food security, economic resilience, and agricultural future.

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