

Experts Propose National ID System for Ethiopia's Livestock

An extract from The Ethiopian Herald, published 20th October 2026, with an article by Yohanes Jemaneh in conversation with Dr. Getinet Mekuriaw Tarekegn, a geneticist and bioinformatician affiliated with the Centre for Tropical Livestock Genetics and Health (CTLGH) and Scotland's Rural College (SRUC).

Experts propose nat'l ID system for Ethiopia's livestock

BY YOHANES JEMANEH

ADDIS ABABA - Experts said a digital livestock registry modeled on Ethiopia's national ID system could boost animal production and help cut the hundreds of thousands of USD the country spends each year importing improved genetics.

Despite holding the largest livestock populations in Africa, Ethiopia has struggled to turn its numbers into sustained economic productivity or long-term food security.

To change that, Geneticist and Bioinformatician Getinet Mekuriaw proposes a comprehensive national livestock identification and registration



Getinet Mekuriaw

system modeled on the national digital ID framework.

He told *The Ethiopian Herald* that giving each animal an individual identity allows precise tracking of parentage, growth parameters and performance. Combining this historical data with ge-

nostic prediction and selective breeding algorithms, he said, could double herd productivity over time. Registration could begin in targeted regions or pilot programs before expanding nationwide.

Getinet added that service fees from livestock owners and commercial breeders could eventually make the registration agency self-sustaining, reducing reliance on external aid. By combining digital identification, structured data collection and targeted genetic improvement, he said, Ethiopia can turn its livestock wealth into a major driver of economic growth and food security.

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Similar systems already operate elsewhere. According to Getinet, the United Kingdom tracks cattle in real time from birth, and Zimbabwe passed mandatory livestock registry legislation as early as 1993. A national database would also link local animal populations to global pedigree networks, strengthening market access and trade leverage.

Past development efforts, he said, have focused largely on short-term subsistence rather than generational planning. Fixing this requires experts and decision-makers to confront gaps in policy execution, research integration and livestock management.

A central problem is the loss and underuse of indigenous genetic resources. Local breeds are naturally adapted to regional climate stresses and highly productive, yet without systematic breeding and preservation programs, valuable genetic material has left the country, been refined abroad and sold back at high commercial prices.

The Boran cattle breed illustrates the point. Originating in Ethiopia, Boran genetics were exported decades ago to Kenya, South Africa, the United States and Australia. In Australia, advanced breeding and embryo transfer turned the strain into a high-value herd that supports a major share of the country's beef industry. In the United States, Boran were crossed with breeds such as Brahman



Nat'l ID model can transform Ethiopia's livestock sector

to create high-performing hybrids, he explained.

Ethiopia may now have to spend foreign currency importing improved Boran genetics that originated on its own soil.

The economics are striking. A high-value breeding bull can yield up to 500 doses of semen daily. At roughly 100 USD per dose, a single elite bull could generate up to 50,000 USD a day over a multi-year working life. Yet Ethiopia spends hundreds of thousands of dollars annually importing improved genetics despite holding the base assets at home, the expert said.

Tsigereda Fikadu, Advisor to the State Minister for Livestock and Fishery Development at the Ministry of Agriculture, said the livestock subsector contributes about 4 percent of national GDP and nearly half of the agricultural economy, but is not delivering the productivity and resilience that farmers and the economy need.

She cited several con-

straints across Ethiopia and Africa: undefined breeding objectives and strategies, limited recording of pedigree and performance data, and inadequate livestock management.

Tsigereda expressed hope that the recently launched African Genetic Evaluation Services (AGENES), designed to help African countries including Ethiopia make better-informed breeding decisions, will address many of these challenges.

"If we are to build livestock systems that can feed our growing populations, create jobs and incomes, withstand climate and environmental pressures, and contribute to sustainable agricultural transformation, we must invest not only in animal health and management, but also in the genetic potential of our livestock populations," she said.

Advances in data collection, statistical genetics and genomics are opening new possibilities for African countries to develop improvement approaches that are more ef-

fective, locally relevant and suited to their environments.

Genetic selection has driven large gains in milk, meat, egg and other livestock production worldwide. "There is no reason why African farmers should not benefit from the same scientific principles while ensuring that the animals we select are suited to the realities of African production systems," she added.

AGENES offers a multi-species genetic evaluation pipeline that converts livestock data into estimated breeding values, helping identify animals with desirable genetic traits. According to Tsigereda, breeders and farmers can increasingly rely on evidence of genetic merit rather than observation, experience or guesswork.

"That matters because the animals we choose today become the parents of the livestock populations of tomorrow," she said. By enabling more accurate identification and use of superior animals, AGENES can help build livestock that are more productive, resilient and better adapted to changing environments.

Importantly, the system's value extends beyond a few advanced breeding operations. Its potential is greatest for smallholder farmers, where better access to genetic evaluation and breeding tools can ensure the benefits of genetic improvement reach those who depend most directly on their animals.



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