



DAIRY ENTERPRISES, IN PARTNERSHIP WITH LAND O'LAKES INTERNATIONAL DEVELOPMENT



BOARD



SENIOR
MANAGEMENT
& EMPLOYEES



SMALLHOLDER FARMERS
& CONTRACTORS



CONSUMERS



COMMUNITY
MEMBERS

Dairy enterprises with operations in Africa utilize artificial insemination technology to enhance the quality and quantity of cows they breed. This case study considers in aggregate some of the gender-smart practices of dairy genetics enterprises situated in the Input Provision and Use segment of the value chain, which have been identified through Land O'Lakes International Development partnerships in East and Southern Africa from 2011 to present. Land O'Lakes International Development is a nonprofit affiliated with Land O'Lakes Inc., a member-owned

cooperative with three diversified agribusinesses in dairy, animal feed and crop protection. Land O'Lakes International Development (henceforth "Land O'Lakes") leads projects and facilitates partnerships primarily in Sub-Saharan Africa, the Middle East North Africa, and South and Southeast Asia. The nonprofit organization works across market systems to scale agricultural technologies and catalyze impact investing among various agriculture actors, recognizing the importance of gender integration particularly in dairy, livestock, and crop systems.

SUMMARY

COMPANY: Various dairy genetics enterprises, located mostly in Europe and the US

COUNTRIES OF OPERATION: Tanzania, Ethiopia, Zambia

AREA(S) OF VALUE CHAIN: Input Provision and Use

GENDER OPPORTUNITIES INTEGRATED:

Small Holder Farmers/ Contractors:

- Contract/hire women in provision of agricultural inputs
- Engage women in non-traditional jobs
- Tailor training content and timing to female contractors/entrepreneurs
- Provide financing to increase access to equipment
- Provide accommodations to help women overcome mobility constraints

Consumers

- Engage women in point-of-sales/service delivery roles to transact with female end users

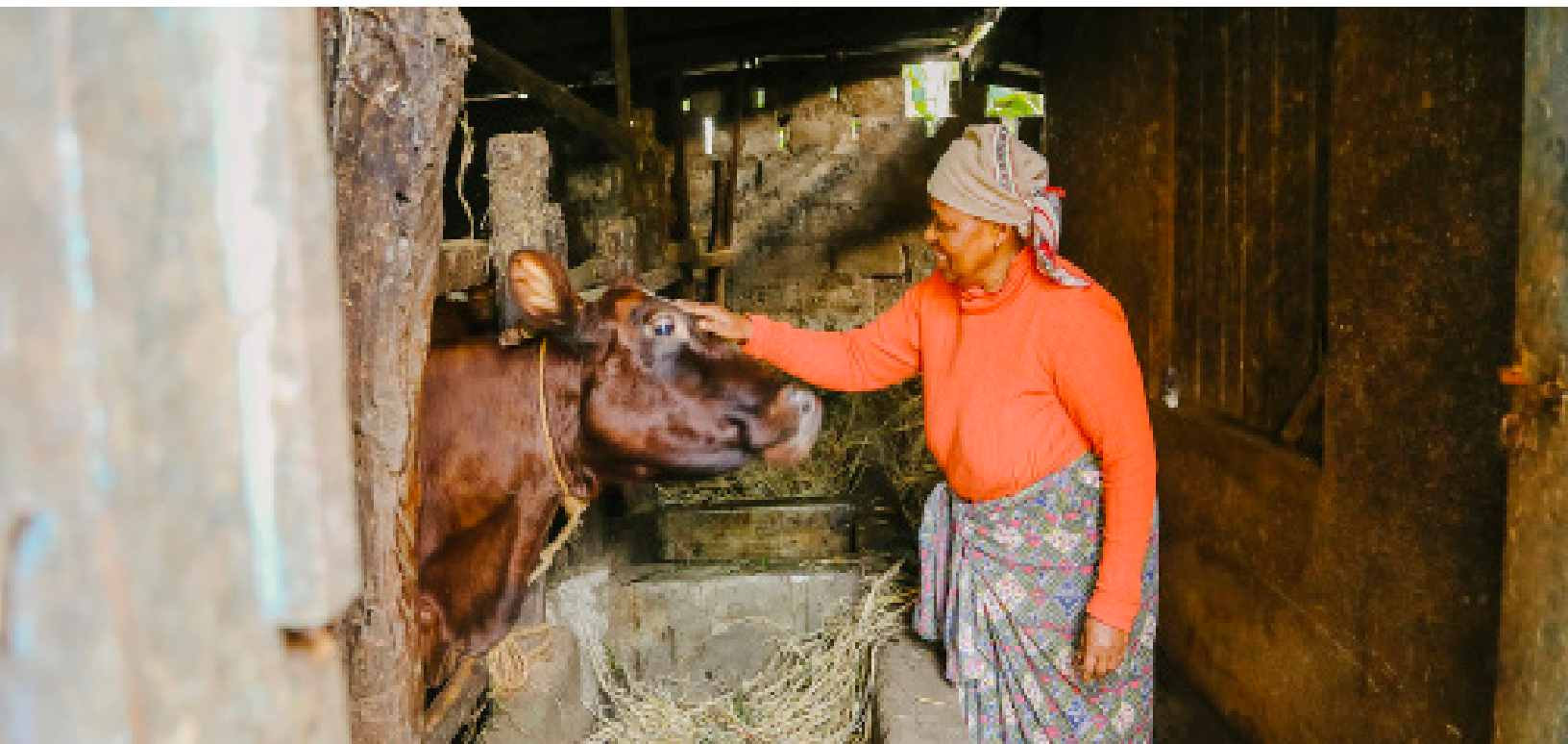
BUSINESS IMPACTS:

- Reliable pool of AI agents enables dairy genetic companies to meet sales targets
- High rates of retention among women compared to men, representing cost-savings in agent turnover
- Women consistently demonstrated higher success rates for AI and better rapport with clients, fostering loyalty to both the entrepreneur and the brands of products used

SOCIAL IMPACTS:

- Cost savings and livelihood gains for households that invest in AI fewer times before succeeding
- Attitude shifts and norm change around women's capabilities and "appropriate" occupations
- Women in homes interfacing with female AI technicians may experience lower levels of harassment from partners and community members than when technician is male

Photo credit: Land O'Lakes International Development.



BACKGROUND ON GENDER STRATEGY

While a cow is often purchased in the name of a male head-of-household, small-scale dairy farming in Africa is traditionally a collective family enterprise that relies on the caretaking labor of women and youth to milk cows and take them to pasture. One step in linking smallholder farmers to commercial dairy markets is access to artificial insemination (AI) technology for improved breed dairy cows. For AI to succeed during the window of several hours when a cow is in heat, a great deal of precision is required. Since the service rendered does not have a 100% success rate but always comes at a fee, it is farmers who bear the costs when technicians overlook details in administering artificial insemination effectively. When the procedure is successful, the birth of a healthy calf represents a valuable new income-generating asset. The demand for effective AI services continues to grow in many countries in Africa where cows have historically factored into livelihoods.

Interest in expanding AI in Africa is also increasing among multinational corporations involved in research and development of dairy inputs. While individual holdings are much smaller on average in Africa, the aggregate number of cows represents a relatively untapped market that companies cannot afford to ignore. This potential market makes the continent attractive to multinational dairy genetics enterprises that are not yet operating in the region beyond exporting products to distribution centers. Most have no customer agents or in-country presence. This limits the penetration and effective use of premium AI products in local markets, even if they are scientifically proven to produce better cows and higher yields. Transaction costs are high because the size of sales to individual farmers is low. Logistics can also be challenging when transporting delicate genetics in liquid nitrogen over long stretches of unpaved roads. For international dairy genetics companies to be profitable in African economies, they must invest in local AI technicians so their product is known and usable. In countries like Tanzania, Zambia, and Ethiopia where the AI infrastructure and technically trained human capital is limited, part of the solution is targeting women to become technicians and sales agents.

While many companies are formalizing women's participation in agriculture value chains at the producer-and processor-levels¹, women feature less prominently at the level of input suppliers. This holds true from seed breeders and feed manufacturers to veterinarians of small and large livestock. In 2011, when Land O'Lakes was supporting dairy development work in Tanzania, there were



Photo credit: Land O'Lakes International Development.

¹ E.g., By ensuring women can attend trainings, demonstrating production and processing methods in inclusive formats, and encouraging women's membership and leadership in cooperatives. See Café Femenino and SolTuna case studies.

virtually no female input suppliers in the country, and very few in neighboring Kenya. Across the region, close to 100% of AI technicians were men. Opportunities therefore exist to commercialize vocational skills in input provision and support women to become entrepreneurs or small business owners.

In the community, perceptions of women's participation in AI vary. Focus groups with Land O'Lakes revealed that most men believed women are too scared to work with cows and potentially be injured, or are biologically incapable of doing the job as "men are the ones who inseminate." Yet even if they doubted women's capabilities, most men eventually softened to the idea of female AI technicians, due to disappointment at the success rate and customer service of the existing male technicians. Many were arriving late, missing the critical window for insemination, and pushing costly products on clients regardless of whether the procedure was effective. Women in focus groups shared that they saw no reason why other women couldn't be AI technicians, since they were already familiar with caring for cows. They similarly found existing technicians to be unreliable and lacking respect in customer interactions. Cultural stigma around meeting with a male technician posed additional challenges for women as AI clients, so the idea of a female technician was unusual, but welcome.

With farmers in need of effective services and information, and interested multinationals facing a shortage of skilled technicians on the ground in sub-Saharan Africa, companies began asking why women are rarely involved in this segment of the dairy value chain. From the perspective of a dairy

enterprise, women are a high potential pool of labor in rural markets. Given the flexibility of the time window for the AI procedure, a technician could arrange her day to visit clients when she is not busy with household responsibilities, or even travel with a dependent if needed. Since women are often the ones home managing livestock, female AI technicians are typically well-received on client visits.



Even if nothing untoward happens, her husband could still comment, 'Why are you alone with this man while I'm out of the house?'



—LAND O'LAKES PROJECT
MANAGER, TANZANIA


Partnering international companies that had worked with numerous female technicians and veterinarians saw no barrier to women's participation. In fact, based on experience in the US and Europe, they even believed women to be more effective in some instances. Though the notion is a stereotype that women are more sympathetic or gentler with animals, this factor was cited by some companies who noted that when women provide veterinary services to cows when giving birth, mortality is 10% lower than for men. A similar hypothesis emerged with AI, that—if accepted by the community—female technicians may even be more effective than men in administering AI technology, due to improved attention to detail, hygiene, and punctuality.

GENDER OPPORTUNITIES IMPLEMENTED & RESULTS

Small Holder Farmers / Contractors:

To meet the growing demand for AI expertise in both Tanzania and Ethiopia, Land O'Lakes proactively recruited and trained females in the non-traditional role of being AI technicians, notably together with male technicians as part of the same cohorts. This strategy was useful for women to link to new social and vocational networks. Men with experience in the sector were available to give technical advice and share experiences, and new colleagues could speak to their female counterparts' credibility and defend them as reputable technicians in the community.

While Land O'Lakes was leery of causing unintended consequences in the community by destabilizing the status quo, the results of training and deploying women AI technicians were more favorable than anticipated.



It is helpful for women to train alongside men who see them develop the same skills and abilities. When men embrace women in this community, it gives the women even more confidence.

—LAND O'LAKES PROJECT
MANAGER, TANZANIA



Relatively better retention rates make women a more valuable investment. Since AI technicians often operate as one-person sole proprietorships, it is common for technicians to change vocations in the event that a more profitable opportunity comes along. Yet for many women, beginning a small business as an AI technician was their first source of income besides selling milk, representing a higher skill and elevation in status that they did not want to lose.

A consistent theme across the countries where Land O'Lakes has facilitated such partnerships between companies and technicians is that female AI technicians maintain the job because of their interest in the improved income and status it affords them. In general, women have fewer alternative sources of income than their male counterparts and thus are less likely to drop out or stop practicing AI than men. In the first Tanzania Dairy Development Project, Land O'Lakes found that 100% of women were retained across the life of the project. Initial data from a Public-Private Partnership for AI Delivery in Tanzania and Ethiopia² corroborates this trend. The project ultimately intends to work with 1,200 AI techs in both countries, with a target of 400 women AI technicians. Upfront investment in training is provided for new technicians, with only one woman to drop out as of September 2018, due to a family issue, whereas dozens of men have left to pursue other opportunities.

Qualitatively, women have been found to cultivate excellent customer rapport, demonstrate closer attention to detail and hygiene, and were also anecdotally more punctual. As a result, female technicians had higher rates of customer retention, indicated by clients calling them back and

² The partnership is a collaboration between the Gates Foundation, Land O'Lakes, private sector partners and government stakeholders.

wanting repeat services from the same technician. Even quantitatively, women have proven to perform better on average. Where a 1:1 ratio indicates successful pregnancy every time (impossible even with the best technician), women across the whole portfolio achieved a lower (better) ratio of attempted AI procedures to successes. In Zambia, the ratio for female technicians averaged 1.3-1.5 procedures before one success; while male technicians averaged 1.8-2.5 procedures. These results are significant, indicating that the best male technician was still significantly not as effective as the worst female technician.³ The missed opportunity for farmers represents additional time and costs to continue attempting AI, while reputational loss may also prove costly for male technicians compared to their more successful female counterparts.



Photo credit: Land O’Lakes International Development.

³This difference represents an entire extra visit to the client, i.e., an additional menstrual cycle for the cow and associated material and logistical costs of attempting the procedure again.



Nobody is going to take this away from me.

—FEMALE AI TECHNICIAN,
TANZANIA



Convinced of the benefits, more and more dairy genetics companies are integrating a gender lens into their input enterprises. As a technical assistance partner, Land O’Lakes helps companies test gender-smart practices to accommodate the training of women as AI technicians, in order to ensure they are successful once deployed as entrepreneurs or effective when contracted as field agents or employees for a specific company.

Operational support strategies may range from continued training and upfront financing to logistical support. Before establishing a formal entity in country, some companies send staff from headquarters to conduct technical and financial trainings, increasing technicians’ skills, confidence and readiness to become agents. Dairy input companies will often co-sign loans, enabling otherwise financially-excluded women and men to access essential upfront capital, i.e. for requisite liquid nitrogen cans and semen straws. This shortens the period before the enterprise is profitable for AI technicians, at which point they may begin repayment and expand their stock. For technicians or company agents marketing their AI services to remote areas, dairy companies may also finance mileage by motorcycle or public transport or reimburse a portion of their transport costs. Companies can also support agents through any

gradual attitudinal shifts. For example, in contexts where it is less common for women to use bicycles or motorbikes, traveling on two wheels to remote clients can initially be more difficult and require a shift in mindset. In the Land O'Lakes supported projects, women reported very little negative feedback from wearing trousers and cycling and felt empowered to undertake the mobility requirements of their new vocation.

Consumers

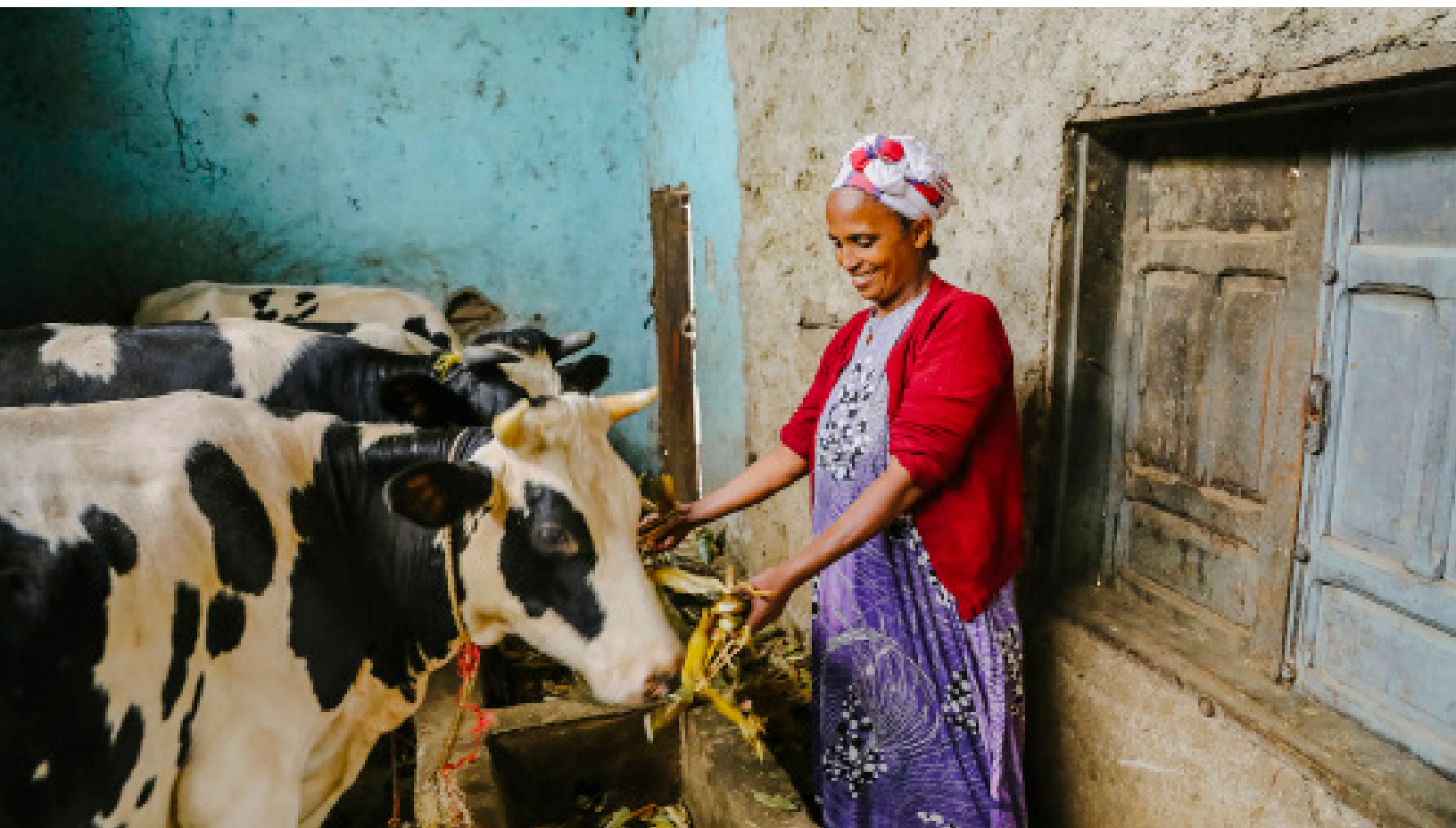
Retaining female agents enhances agriculture companies' capacity to reach women as a consumer market. This is particularly important given the fact that women often comprise a majority of clients at point-of-sale, as the primary livestock caretakers who interface with AI technicians.

"Owing to norms of social contact" and women's roles as communicators, they may be better situated in some contexts to serve as company sales representatives. Especially (but not only) when providing products and services to other women door-to-door, they can effectively attract new clients, foster brand loyalty, and ensure correct use of inputs. A growing base of loyal customers directly benefits the agent or entrepreneur, as well as the company whose products she utilizes.

⁴ IFC (2016). Investing in Women along Agribusiness Value Chains.

Available at: https://www.ifc.org/wps/wcm/connect/02c5b53e-420f-4bf4-82bb-6f488ff75810/Women+in+Agri+VC_Report_FINAL.pdf?MOD=AJPERES&CVID=m0JfSbv

Photo credit: Land O'Lakes International Development.



LESSONS LEARNED:

1. Moving up the livelihoods ladder from small-scale farming to starting a microenterprise is a high potential strategy to empower women. Women's relatively fewer options for alternative sources of income may contribute to higher completion and retention rates among women in sponsored vocational or technical training. As one female AI tech explained, "no one can take this away from me."
2. Women can be instrumental in developing new markets for products and services when their roles as communicators and social catalysts are leveraged as door-to-door technicians or sales agents, especially when selling to and interfacing with female customers.
3. Just as evidence for a "business case for gender integration strategies" may inspire companies and funds to start investing in women, seeing a clear benefit to the household can change community members' attitudes around women entering certain job functions or industries.
4. The lack of other income-generation activities may actually increase retention and performance of female AI techs as they feel fortunate to have this opportunity and want to maximize returns.

Photo credits: Land O'Lakes International Development.



This is how gender norms are able to change. Men who used to laugh at the idea of training women have seen their spouses or female family members become technicians. Now some have even come up and said, 'I want my daughter to become an AI tech; what does she need to do?' In communities where they've seen at least one [woman technician], it paves the way for others to follow after her.

—LAND O'LAKES PROJECT
MANAGER, TANZANIA

IMPACTS:

Business impacts:

- Training women and men as AI technicians enabled dairy genetic companies to access a reliable pool of agents and increase their sales targets through deploying more technicians in-country.
- Women trained as AI technicians demonstrated high rates of retention in the practice compared to men. Therefore, investing in women represents cost-savings in agent turnover and replacement trainings.
- Female technicians facilitating artificial insemination achieved higher success rates in dairy cows (for example, a success rate of 1.3-

1.5 for female AI techs compared to 1.8-2.5 for male AI techs in Zambia) and developed better rapport with clients. As a result, smallholders interacting with female technicians experienced greater client satisfaction, which fosters loyalty to both the entrepreneur and the brands of products used.

- Attitudes are shifting around women's capabilities, leading to gender norm change in occupational segregation. By interacting with female technicians, community members are beginning to adjust what they consider to be "appropriate" occupations for women and men. In many of the emerging markets that multinational dairy enterprises are entering, cows are people's most valuable assets. If transacting with a female technician is going to grant rural families affordable access to AI for improved breeds, and especially if women's success rates remain high, regressive norms and attitudes will continue to shift and allow more women to enter non-traditional roles, to the benefit of their households and the local economy.
- Women in homes interfacing with female AI technicians may also experience lower levels of harassment from partners and community members than when their AI technician is male.
- Higher AI success rates also represent cost-savings for farmers who invest in AI fewer times. Successful pregnancy and birth of an improved breed calf also translates to eventual livelihoods improvements for the household.

This case study was conducted through (1) a review of Land O'Lakes program documentation from Land O'Lakes International Development, the VEGA Alliance and the International Finance Corporation, (2) an interview conducted with Giselle Aris, Enterprise and Gender Development Specialist at Land O'Lakes International Development.

Suggested citation: Martin, S.J. (2018). *Gender Integration in the Agriculture Sector: A case study with Land O'Lakes and dairy enterprises in Africa*. Developed by the International Center for Research on Women for the ICRW Gender-Smart Investing Resource Hub, with support from Land O'Lakes International Development, PwC, CDC Group, and DFID Impact Programme."