



Investing in Kenyan  
Co-operative Development  
for Education, Health,  
and Economic Vitality

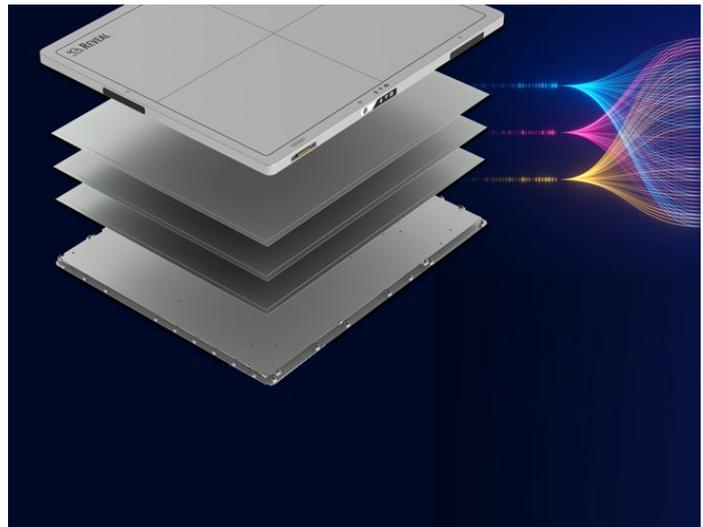
## Highlights of 2024

In 2024, KKFC continued to provide high school scholarships, operate Early Years programs and drilled a water well. This year's newsletter highlights an exciting medical imaging project and also celebrates ten successful years of our Cooperative Dairy Development Project.

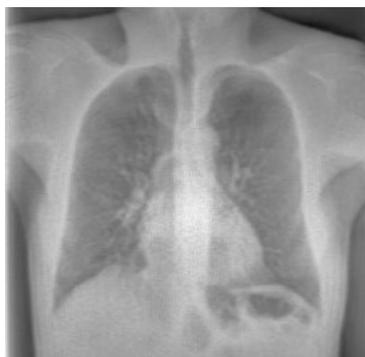
### Access to advanced medical X-ray imaging;

In February 2016, when Karim S. Karim (a KKFC supporter) and his wife Tas were attending a conference in Nairobi, Kenya, they made a short side trip to the Cherangany region. They visited KKFC's Dairy Project, one of our Early Years programs, and met with high school scholarship students. Since that time, Tas has become an active volunteer serving on KKFC's Education Committee. Karim has long dreamed of finding a way to provide better access to medical imaging for people around the globe. In 2015, he and Amol Karnick co-founded KA Imaging, which now produces imaging equipment approved for clinical use in many jurisdictions around the world including Canada, the U.S., Europe.

KA Imaging's Reveal 35C X-ray sensor is unique in that it has three sensing elements rather than just one. The incoming x-ray radiation is separated into different bands to produce three images which provide additional information about the patient. For example, if a small white opacity (spot) is seen in a standard X-ray, it is not possible to tell if it is soft tissue or a calcified bone. However, with KAI's technology, if the opacity that showed up in the image of the bones disappears in the image of the soft tissue, you are able to determine that it is calcified. With standard X-ray equipment you would require an expensive CT to do this!



Standard X-ray



Soft Tissue



Bones Image

## K.A.Imaging meets KKFC:

Early in 2024, Karim approached KKFC about the possibility of working together to bring KA Imaging's technology to Kenya. Karim's dream was to have "innovative x-ray everywhere."

A plan was developed to ship a portable X-ray system that would be installed at a hospital in a rural area of Kenya. The system included:

- a KAI Reveal 35 C X-ray detector
- a portable X-ray source
- a laptop with special imaging and AI software
- equipment installation and staff training

The estimated cost for the project, including shipping and importing fees, was \$125,000 Canadian.

The first of three fundraising events was held in June 2024 at KA Imaging's office in Waterloo. Karim announced they would provide substantial discounts and help KKFC raise the remaining funds. Amol introduced the project by saying "When we first started KA Imaging, we really focused on the social aspect. We wanted to do social entrepreneurship, focused on global health. We wanted to make sure that x-ray technology, especially innovative x-ray technology, was accessible in all parts of the globe." That event got the project off the ground (literally) and soon the portable X-ray device was shipped by air to Kenya in a custom-built crate donated by Herrgott Industries (St. Clements).



In August, Karim and his family traveled to Kenya to install the equipment at the Village of Hope Hospital. Karim and his daughter, Hana, were able to unpack, install, and test the system on their first day at the hospital. They then turned to the task of training the staff at the facility, which went very smoothly. Brandy, an x-ray technician, was thrilled. "This technology is mind-blowing, it is amazing. Let me just start with that!"

The AI software soon detected a possible case of TB and the hospital was able to refer the patient for follow-up tests and treatment.

## A Truly Portable X-ray System:

A highlight of the trip for Karim and Hana was when they loaded the KAI imaging system into an ambulance and took their system “on the road”.



They were able to set up the equipment and take images of patients off-site, proving just how portable the system really is. Karim explains how this makes a difference. “The portable system can be easily deployed in remote areas since the equipment is very portable and easily transported in a small vehicle. Taking this imaging technology into the field helps provide early detection of diseases such as tuberculosis, pneumonias, lung nodules, lung cancer, asthmas, and even fractures.”

In October, KA Imaging and KKFC, in collaboration with Waterloo Medtech, hosted two fundraising events in Waterloo in the Doctor’s Lounge at the Boardwalk Medical Centre. This successful project is continuing with monthly zoom calls between KAI, KKFC and Village of Hope staff. Our long-term goal is to see this technology providing much needed diagnostic imaging for patients elsewhere in Kenya.



## 2014 – The beginning of our Dairy Project:

This year, KKFC celebrates ten years of working with small scale Dairy Farmers in Cherengany Kenya. We would like to share memories and acknowledge the work of our KKFC directors\* and many volunteers. The project started in June 2014 when Blair McKay\* and Dr. Karen Galbraith\* of Legacy



Holsteins traveled to Cherengany where they visited local farms and toured milk-chilling and processing facilities. They learned that small-scale dairy farmers rely on milk produced by only two or three cows to provide essential nutrition for their families and to earn the income needed to pay for school fees and other basic needs. Farm income was limited by inefficient farming practices and lack of milk refrigeration equipment, making it difficult to rise from poverty. In order to help farmers improve milk production and increase family incomes, KKFC decided to focus on providing training and financial support so dairy cooperatives could obtain milk-chilling equipment. In November 2014, Eluid Kitchwen was hired as our Kenyan-

based Project Manager of Training. His role was to organize training sessions and bring farmers together to share their collective knowledge.

On December 23, 2014, just in time for Christmas, employees of Cribit Seeds (West Montrose, On) and KKFC volunteers filled a forty-foot container with:

- 4 refurbished 3,000 L milk cooling tanks
- 2 liquid nitrogen tanks for Artificial Insemination (AI)
- Two 10 Kilowatt diesel generators with fuel tanks
- custom milk receivers (designed by Martin Voigt, EFT Plastics, Listowel)

In addition to the dairy equipment, we included books, running shoes, athletic clothing and even a small water well drilling rig!

Early in 2015, Caleb Kirau was hired as our Project Manager of Construction. He came to Canada in the middle of a snowy winter and worked with our Canadian team to the design milk-chilling plants. He toured a variety of Canadian dairy farms and visited Semex Canada, Cribit Seeds and the Gay Lea Dairy facility in Guelph. He was also trained in Artificial Insemination (AI) with a short course provided by EastGen (Guelph, On).



## Ten years of Cooperative Dairy Development:

In April 2015, we were delighted to receive a Gay Lea Foundation grant to support our Cooperative Dairy Development Project. Karen and her husband Steve Dolson arrived in Kenya that same month. They shared their extensive experience in the Ontario dairy industry. Stewart Skinner\* and his wife Jessica Kelly were in Kenya in June delivering workshops on farm management and computer technology skills.

Blair and Gary Dickerson arrived in late June to coordinate the container unloading process. With only a \$30 Canadian Tire winch, two metal bars, many eager hands and some basic physics, it took two weeks to unload! By mid July, a pair of milk cooling tanks and the back-up diesel generators had been installed in newly constructed buildings at both the Mwaita and Taito Dairy Cooperatives.

In July, Pierre Marx, (based in South Africa for Semex Canada) delivered full-day training workshops about the benefits of using AI (Artificial Insemination) to improve cow genetics.

In early 2016, Chris Moore\* visited the cooling plants and investigated problems caused by excessive voltage fluctuations on the power “grid”.

Later that spring Blair and Brian Tithecott\*, and a retired dairy farmer, Marv Reesor, arrived on site. They brought electrical test equipment and with the help of local refrigeration technicians, they were able to repair the coolers and install power protection equipment. Brian provided hands-on computer skills training and helped the cooperatives develop business plans. Marv visited numerous farms and shared his knowledge of dairy farming. Meanwhile back in Canada, we created several newsletters, which were printed in Kenya and distributed to active co-op members. Late in 2016, we received photos of the first calves born as a result of our Artificial Inseminations services.



In 2017, Blair was joined on a trip to Kenya by Nell Van Walsum\*, a Canadian hydro-geologist. They worked with Dan Chepkwony, who had been hired as our Water Project Manager to drill water wells. A well was completed at the cooling plant in Mwaita that October.

In 2018, a wood-fired hot water system was installed at the Mwaita milk-chilling plant, making it possible to pasteurize milk. Our busy cooperatives began operating a SACCO (Savings and Credit Cooperative Organization), making it possible for members to purchase farm supplies and AI services on credit. School fee loans from the SACCO allowed more children to attend school. Loans also helped members finance farm improvements.

## **2024 – Going Strong!**

In February of 2019, Karen and her husband, Steve, returned to Kenya. They led workshops on a wide variety of topics from breeding and nutrition to the best management practices for the dairy cooperatives. Karen also delivered a special “Agriculture for Women” workshop. Karen and Steve reported seeing a significant increase in silage making and an increased use of Artificial Insemination. Their visits to high school agriculture clubs led us to select four high school graduates to receive Ag College scholarships. We planned for these students (2 boys and 2 girls) to start college in Kenya in May 2020, but COVID delayed their start. While they waited for their college programs to begin, the students participated in a hands-on learning experience using a small area of land on their parents’ farms. They worked via zoom with Quentin Martin\* to investigate how fertilizer and manure affected kale production. Photos and videos were shared with our Agriculture Committee.

Late in 2020, milk-packaging equipment was installed at the Mwaita facility, making it possible to sell pasteurized milk locally.

In January 2022, we hired Hosea Kiplimo as our first Agricultural Extension Officer. We applied for and received a grant from the GayLea Foundation to fund a female Dairy Extension Officer. Carolyn Chibet, who has a B.Sc. in Agricultural Extension Education, was hired in July 2022 and has been providing valuable education and extension services since that time. Our Ag-Extension Team has grown to include Shem, Faith and Eliud (who provides veterinary and AI services). Karen, Steve, Quentin, and other volunteers support the team with weekly zoom meetings. This support has improved milk production and led to higher farm incomes.



In 2023, with the financial support from the World Bank, equipment was installed so that milk can be processed, packaged and sold as long life (UHT) milk. The UHT processing line will be fully operational early in 2025.



In early 2024, Brian, Brenda, Quentin and Jean, visited our projects in Kenya. They had the opportunity to spend time with our Kenyan team members. They were amazed and delighted to see how our Dairy project has grown since 2014. A highlight of their trip was presenting a plaque made by Brian to Allan Mwangi (chair of Dairy Farmers of Cherangany) celebrating his 10 years of service to the project. While KKFC has provided expertise and motivation, it is the local leadership and hard work of the Kenyan agricultural community that has led to the growth and success of our Cooperative Dairy Development project.

### **Kenyan Kids Foundation Canada**

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We invite you to consider volunteering on one of our committees (Agriculture, Administration, Education, and Water).

Please contact us at [info@kenyankidsfoundation.ca](mailto:info@kenyankidsfoundation.ca)

Donate at [www.kenyankidsfoundation.ca/donate](http://www.kenyankidsfoundation.ca/donate)

for more information about our X-ray project, visit <https://www.kenyankidsfoundation.ca/kax>