



About FORQLAB

As we continue to unpack the opportunities that 2024 brings, we invite you to a deep dive into the latest updates from FORQLAB. Our consortium has been bustling with activity, and we're eager to share the insights and progress made by our students, researchers and other partners. Discover the insightful findings, innovative solutions, and impactful initiatives that continue to shape the future of the avocado and value chains in Kenya.

The expected results of FORQLAB include ten Master theses on food loss and quality; followed by capacity building with the cooperatives to improve their practices and finally the uptake of this approach in education.

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Erikan Offiong (3rd left) graduate of Van Hall Larenstein University speaks at a round table session of the World food day

Activities and Events for 2024

We are thrilled to share with you the exciting line-up of activities and events planned for the first quarter of 2024. These initiatives align with our consortium's mission to foster collaboration between universities, farmer cooperatives, and business partners in addressing food loss challenges within the avocado and dairy sectors in Kenya.



Dr. Eric Mworira (left) explains the process of grafting young plants for the growing avocado sector.



Farmers at previous consultative and knowledge exchanging sessions at Githunguri dairy farmers cooperative society in Kiambu

Welcoming Four Kenyan Students to Velp

on January 28, four enthusiastic Kenyan students will commence their 4-5 month stint in Velp, the Netherlands. This experience will provide them with a unique opportunity to engage in research, gain hands-on experience, and broaden their perspectives on the technical solutions and governance interventions required for the reduction of food losses in Kenya.

TVET Curriculum Development Workshop

From February 26 to March 1, FORQLAB will host a Technical and Vocational Education and Training (TVET) curriculum development workshop. This workshop is a crucial step in ensuring that our educational initiatives align with the practical needs of the avocado and dairy sectors.

Innovation Mission Kenya

Mark your calendars for the [RVO Innovation Mission Kenya](#), scheduled for March 18-22. This mission will help to explore innovative solutions and strategies that can be applied to address challenges in the avocado and dairy sectors.

Final Workshop of the FORQLAB Consortium

In the last week of April, we will convene for the final workshop of the FORQLAB consortium. This event will be a culmination of our collective efforts and will provide a platform for sharing insights, presenting research findings, and refining our strategies moving forward.

Second Exchange Visit to the Netherlands

we are excited to announce a second exchange visit to the Netherlands in May 2024. Four students, along with Eric Mworira, will have the opportunity to explore firsthand the advancements and best practices in the avocado and dairy sectors. This visit will facilitate knowledge exchange and further strengthen their knowledge in reducing food losses

FORQLAB side session at World Food day event

In the Netherlands, World Food Day 2023 was organised by the Netherlands Food Partnership on October 12. The overall theme was 'Recognizing the role of private sector in creating sustainable food systems'. About 300 people participated, including (international) students from Van Hall Larenstein, AERES and other universities.

Marco Verschuur (coordinator of FORQLAB) chaired a side session on the living lab approach. A living lab is essentially about cooperation between universities, private sector and other actors in and around the value chain. Living labs are suited for solving complex problems such as food losses

After this, the participants in the side session discusses 3 provocative statements:

- A B2B approach and a Living Lab approach are conflicting concepts
- Involving private partners in the Living Lab affects inclusiveness
- Knowledge institutions are the appropriate stakeholders to consolidate the Living Lab

In summary, participants agreed that a living lab requires the positive participation of the private sector. Private sector was generally understood as the traders that buy avocados or milk from farmers, while some included input suppliers, service providers, and even farmer coops. The point of positive participation is the long term interest to develop value chains that allow margins for all chain partners, including B2B relations.

Inclusiveness may be affected by business interests. From the presentation it was noted that established coops (in dairy) may be better at balancing power in the chain with other actors.

On inclusivity, it was noted that Kenya has patriarchal land rights. And typically, while women do the work, males control the profits of avocado and dairy. The challenge of inclusivity also exists within a cooperative structure.

Knowledge institutes have the capacity for doing practical research, although there are trade-offs between the agricultural and the academic calendars. On the other hand, as a neutral party, knowledge institutes may support the policy dialogue needed for complex issues such as food losses.



Attendees at the World food day event

Collaborative learning-exchange to mitigate milk-losses

Six farmers from Kitinda and Kaptama Dairy Farmers Co-operative Societies engaged in an insightful learning exchange at Githunguri Dairy Farmers Co-operative Society to share lessons and strategies on how to mitigate milk losses and improve quality. The exchange that took place between December 12 and 15, 2023 provided a platform for participating cooperatives to share the challenges around quality management and learn about Githunguri Dairy Farmers Co-operative Societys strategies for mitigating losses across farm practices, collection, and storage

Meeting the avocado cooperatives in Nandi county and Meru county.

Model farm visits to two distinct farms in Githunguri (Kiambu County) with varying levels of farming intensity and efficiency facilitated a comprehensive understanding of the intricacies of commercial dairy farming in the region. The visit exposed the participating cooperatives to aspects affecting milk quality such as scale, investment, and farm objectives. Following peer engagement and learning, the participants engaged in discussions to identify areas of improvement within their own Back Home Action Plans (BHAPs).

Milk Collection and Transportation

Githunguri Dairy Farmers' Co-operative Society also showcased its milk collection and transportation process, strategies and economic factors affecting logistical operations, including the choice of the most viable transportation model for milk for processing, and approaches to milk loss reduction at the collection centres. Strategies for increased milk quality highlighted include a short supply chain, standardizing milk delivery with the exclusive use of aluminium cans and upholding meticulous digitally-enabled collection procedures, involving rigorous tests conducted by graders before purchase.

Highlighted milk losses at the collection centres primarily resulted from rejection due to poor-quality milk and occasional spillage during milk transportation from collection centres to cooling points. Instances of spoilage from delayed transportation are rare, emphasizing the crucial role of contracts with transporters to guarantee secure and timely milk delivery.

Back Home Action Plans (BHAPs)

The learning exchange culminated in the development of individual BHAPs by Kaptama and Kitinda Dairy Farmers' Co-operative Societies. The action plans represent a commitment of the societies to turning the lessons learned during the exchange into real, tangible improvements within each cooperative. Key aspects of the action plans include society-respective operational, environmental, and technical challenges and stakeholder roles involved in translating lessons to impact. Crosscutting actions include capacity-building, resource mobilization, proper accounting and record-keeping, policymaking and systems improvement.



Farmers exchanging ideas at Githunguri dairy farmers cooperative society in Kiambu

Mycoop training for leadership of avocado-cooperatives

During a week of heavy rains in Meru, Kenya, FORQLAB partners organised a basic training with the avocado cooperatives that joined the initiative. In four days, the following topics were covered: the basics of cooperatives; providing services to members; and supply of farm inputs. The training culminated in smart work plans for each cooperative. FORQLAB and NFP collaborated on this training with Agriterra.

The FORQLAB partners work on applied research into technical interventions and governance interventions that encourage safe products and reduced food losses in dairy and avocado sectors in Kenya. This training surely counts as a governance intervention, as stronger cooperatives tend to manage quality and losses in a better way.

The mycoop training was conducted by Raymond Lyimo and Esther Kalanza, two seasoned trainers from Agriterra. Their training approach uses interactive methods and a variety of examples to ensure active participation. A major point of reflection is how to serve the members in a sustainable way. In the words of one cooperative president: "Our members asked for training in pruning and tree management. We would love to provide this service to them, but the training made us aware of the costs and the risks. Since the small farmers can't pay themselves and NGO's will not help forever, we better talk with the county authorities to send extension agents."



Participants of the mycoop training in Meru

The training also provided space to discuss a recent measure by Kenyan authorities. Early November, they banned the sea export of avocados. One representative explained: "The export ban returns every year at the end of the season. It is a temporary measure from the government when our avocados do not meet international standards. They lift the ban again when the next avocado harvest season arrives. Meanwhile, farmers should stop picking premature fruits as it harms our export reputation."

Participants in the training included 17 board members of the four avocado farmer cooperatives in Nandi, Mount Kenya, Mount Kenya East and Abothuguchi. They go home with smart action plans to increase membership and member shares, to negotiate extension services with county authorities. One cooperatives plans to engage with Yara in fertilizer distribution.

Also, five Meru university students participated in preparation of their exchange semester at Van Hall Larenstein in 2024. And three staff from Meru University of Science and Technology participated and also organised a visit to the university campus and to mr. Frederick Name, a local avocado pioneer with older stands of Fuerte and Hass avocado trees.

New reports/thesis by students

As we continue our mission to bring positive change to the avocado and dairy sectors in Kenya, we invite you to dive into the wealth of knowledge generated by our talented students through their research theses. These theses underscore the essence of our program, focusing on practical solutions that address real challenges faced by farmers and other stakeholders.

The most recent addition to the collection is by Tom Engels and Tijmen Droog (HAS-students). This explores **Finding the right product-market fit for avocados from the Nandi cooperative**.

Other previous theses have explored the following themes and topics:

Assessment of Readiness of Adopting Quality-Based Milk Payment System (QBMPs): Learn about the efforts to enhance the quality of milk production and reward systems that benefit both farmers and consumers. This research by Ihan Guled (VHL - Master student) sheds light on the readiness of farmers to embrace quality-driven approaches.

Transport of Milk - From Farm Production to Processing: Explore the intricate journey of milk from the farm to the processing plant. Done by Linda van den Broek (HAS-Student/minor at Aeres) this research gives insights into the transportation challenges and solutions that impact the freshness and quality of the final dairy products.



Green Juniors, 3 students of InHolland university of applied sciences also recently presented their group business assignment report which seeks to **improve the information exchange in the avocado value-chain in Kenya and improve farmers bargaining power**.

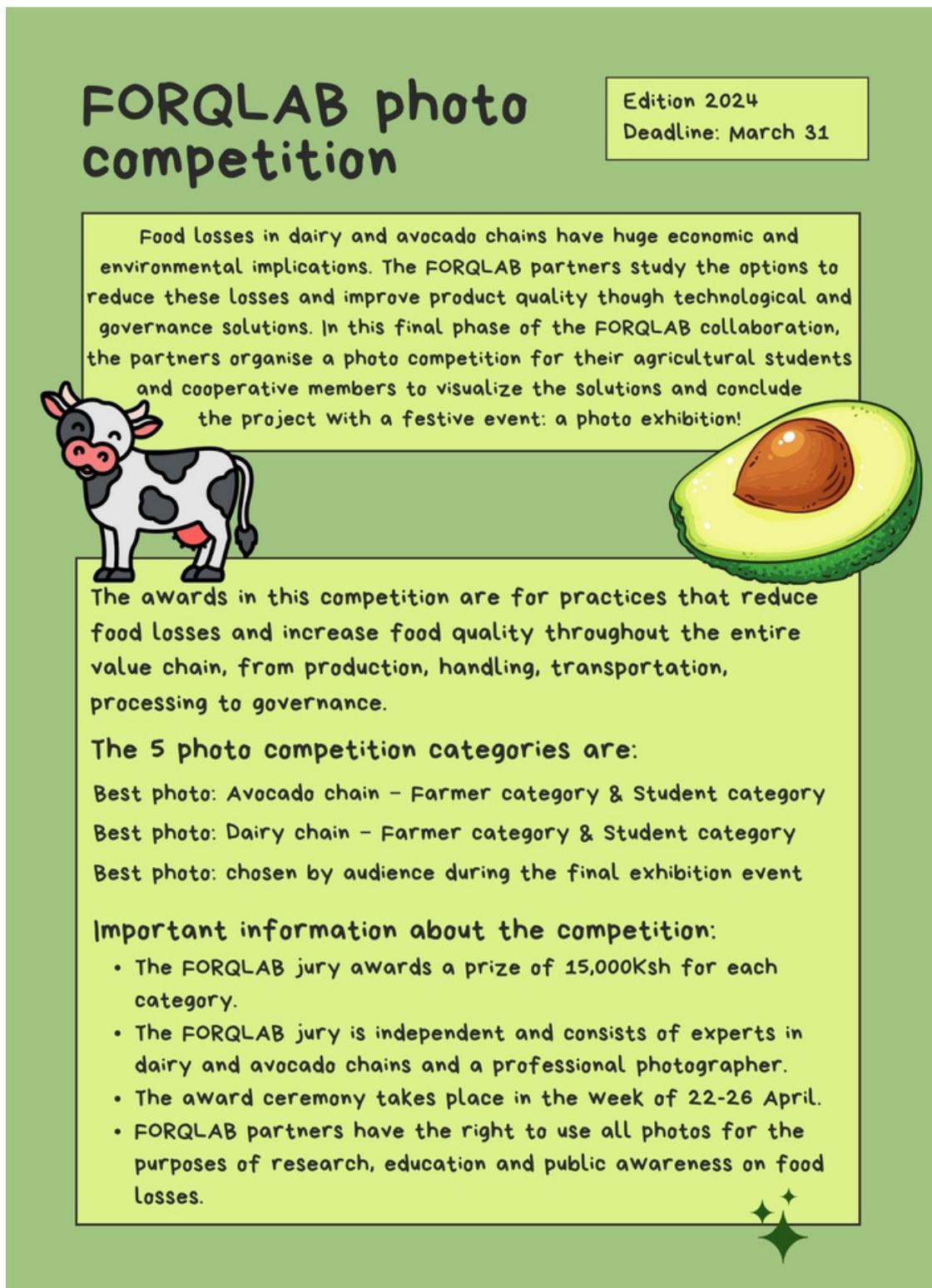
The research theses, reports and videos are available on the [FORQLAB community_page](#) on NFP Connects. Have a look and leave a comment.

Students presenting their research at Van Hall Larenstein University

Announcing the FORQLAB photo competition

FORQLAB is thrilled to announce the opening of our photo competition for agriculture students and cooperative members! Register now to capture the essence of challenges and successes in mitigating food loss along the dairy and avocado sectors in Kenya.

See the poster below for details on how to enter the competition.



The poster is a green-themed announcement for a photo competition. It features a title, a deadline box, a central text box with a cow and avocado illustration, and a detailed text box at the bottom. The background is a solid light green color.

FORQLAB photo competition

Edition 2024
Deadline: March 31

Food losses in dairy and avocado chains have huge economic and environmental implications. The FORQLAB partners study the options to reduce these losses and improve product quality through technological and governance solutions. In this final phase of the FORQLAB collaboration, the partners organise a photo competition for their agricultural students and cooperative members to visualize the solutions and conclude the project with a festive event: a photo exhibition!



The awards in this competition are for practices that reduce food losses and increase food quality throughout the entire value chain, from production, handling, transportation, processing to governance.

The 5 photo competition categories are:

- Best photo: Avocado chain – Farmer category & Student category
- Best photo: Dairy chain – Farmer category & Student category
- Best photo: chosen by audience during the final exhibition event

Important information about the competition:

- The FORQLAB jury awards a prize of 15,000Ksh for each category.
- The FORQLAB jury is independent and consists of experts in dairy and avocado chains and a professional photographer.
- The award ceremony takes place in the week of 22-26 April.
- FORQLAB partners have the right to use all photos for the purposes of research, education and public awareness on food losses.



How to join the FORQLAB photo competition?

1. Verify that you are registered as a member of a cooperative or as agricultural student at an university that partners in FORQLAB. See the partner overview below.
2. Prepare yourself by checking technical tips for photography and image composition online.
3. Use a smartphone or a camera to take photos. Make use of the maximum quality setting.
4. Please ensure consent of people captured in your photos!
5. Add a clear title and description for the photo (max 1 sentence).
6. **Submit your photo* via www.pollunit.com by scanning this QR code:**
7. Remember the deadline: March 31st. The award ceremony will take place during the FORQLAB week from 22-26 April 2024.
8. In case of questions, please refer to [this FAQ page](#).

*submit max. 2 photos per person



The cooperative partners are:

- Githunguri dairy farmers coop society
- Kaptama dairy farmers coop society
- Kitinda dairy farmers coop society
- Abothuguchi avocado growers coop society
- Mt. Kenya avocado coop society
- Mt. Kenya East avocado farmers coop society
- Nandi avocado farmers coop society

The FORQLAB university partners are:

FORQLAB
Food Waste Reduction and Food Quality Living LAB

Food for Thought expo by Kadir

Award winning and renowned Dutch photographer and filmmaker Kadir van Lohuizen travelled to Kenya where he was amazed by the mega vegetable growers who produce green beans and mango cubes for Europe. The East African country is an important player in the global food system. For Instance, large quantities of green beans are grown in the Country's savannah such as at the company Inter-veg, which produces five tons of green beans every week, 70 percent of which goes to the Netherlands.

Through the project, Kadir explores the intricate processes of harvesting and packaging of vegetables destined for the European market.

He captures all this through photography, film, and drone footage. Click [through this link](#) to see more details and about the exhibition in Amsterdam.



FORQLAB Community

FORQLAB's online community is hosted by Netherlands Food Partnership. It's a space to come together, exchange and share and find common ground and energy for action.

You can find this newsletter and many other updates from FORQLAB [at this link](#)

The FORQLAB university partners are:



CoE GROEN
CENTRE OF EXPERTISE



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Food Waste Reduction and Food Quality Living LAB

