

Scaling CoolVeg's Clay Pot Cooler Training Program

Reducing Food Loss and Improving Nutrition in Arid Regions

Food security in the Sahel and other arid regions in Africa is an ongoing challenge that will only be exacerbated by climate change. It is estimated that 30% to 50% of fruits and vegetables harvested in Sub-Saharan Africa are lost before being consumed. Insufficient access to effective storage solutions leads many households to make frequent and lengthy market trips, contributes to significant food losses, and limits regular consumption of nutritious fruits and vegetables.

A Simple, Proven Solution

Clay pot coolers are simple, affordable, and effective devices that can solve these challenges for many families. By providing a cool and humid storage environment, clay pot coolers can improve the shelf-life of many common fruits and vegetables in hot and dry regions. For instance, using a clay pot cooler can increase the shelf-life of leafy greens from 1 day to 6 days, African eggplants from 3 days to 15 days, and carrots from 3 days to 18 days. These devices can be quickly and easily assembled using locally available materials and typically cost between \$2 and \$10, depending on their size and local materials costs.

Open basket after 3 days



Clay pot cooler after 3 days

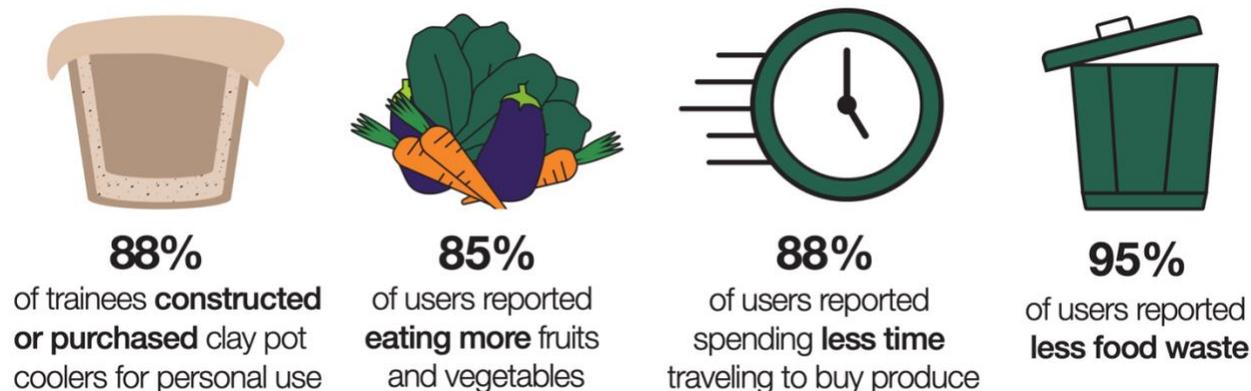


While using a clay pot to store and keep water cool in the hot and dry regions of Africa is extremely common, few households use clay pot coolers for fruit and vegetable storage. In both cases, cooling occurs from the evaporation of water from the outer surface of a clay pot and other wetted surfaces.

CoolVeg's Training Model

To address this gap, CoolVeg developed its [clay pot cooler training program](#) in collaboration with MIT D-Lab, World Vegetable Center (WVC), and the Institut d'Economie Rurale (IER) in Mali to address this knowledge gap. The program builds on indigenous knowledge, adapting the "Zeer pot" concept by using materials that are **less expensive and more widely available**, while

delivering comparable performance. The content of the training program is designed to be simple and relies heavily on images, videos, and hands-on activities. This approach has been proven effective in stimulating clay pot cooler usage, with very high adoption rates. The implementation of this training program in Mali and Niger has allowed thousands of households to save time and money while avoiding food spoilage and having greater access to nutritious fruits and vegetables. These outcomes are made possible by the improved storage environment provided by clay pot coolers.



A key strength of the program is its **scalability through existing community and government information networks**. Our cascade training program starts with intensive three-day Training of Trainers (ToT) workshops led by the CoolVeg team, covering fruit and vegetable storage principles, clay pot cooler assembly, and teaching methods. Trained participants—including agricultural extension agents, cooperative members, health workers, and teachers—then deliver trainings within their own communities. This community-centered approach keeps costs low while ensuring local ownership. By including clay pot makers and sellers along with vegetable farmers, vendors, and consumers in the training sessions, the program creates both supply and demand for clay pot coolers. Information continues to circulate after the training sessions; in Mali and Niger, trainees reported sharing knowledge about how to make and use clay pot coolers with an average of 10 people, and 80% of trainees observed adoption among those they taught.

Impact to Date

To date, more than 320 training sessions have been conducted in Mali and Niger, directly reaching over 8,000 participants. Through informal knowledge sharing by trainees, an estimated 80,000 additional community members have learned about clay pot coolers. An estimated 35,000 households are now using clay pot coolers as a result of CoolVeg’s training program, benefiting over 200,000 people. When delivered at scale, this program is highly cost-effective, delivering **lasting food-security gains for less than \$1 per person reached**. This cost estimate includes Training-of-Trainers (ToT) workshops, community-level training, project management by CoolVeg and local partners, and general awareness and promotional activities. Implementing the training program through schools offers particular promise for even greater cost-effectiveness and scalability.

Instead of building a sales and distribution network for physical products, CoolVeg’s knowledge dissemination program leverages the simplicity and local availability of the technology. This lowers the cost of clay pot coolers for users and ensures that widespread usage of clay pot coolers can be sustained without the input of external resources.



Left: Mariame Sogoba (World Vegetable Center) explaining how clay pot coolers function and best practices for their use during a ToT workshop in Maradi, Niger. Right: Zabeirou Harouna and Ado Habou placing jute sacks on top of a recently assembled clay pot cooler during the first day of the ToT workshop.

Path to Scale

CoolVeg is seeking philanthropic support and strategic partnerships to expand its clay pot cooler training program across the West African Sahel and other arid regions where improved fruit and vegetable storage is urgently needed. The Sahel—home to approximately 180 million people living largely in off-grid, rural communities—is among the world’s most food-insecure and climate-vulnerable regions.

Support at this stage plays a catalytic role, enabling the program to scale in close partnership with ministries of agriculture, education, and health, reducing early implementation risk and accelerating adoption through existing government and community systems. With this support, the program has the potential to reach tens of millions of households, reducing food loss and daily burdens while strengthening resilience to climate change and enabling families to regularly eat healthy fruits and vegetables.

CoolVeg invites individual philanthropists, foundations, and government partners to help bring this proven, highly cost-effective approach to scale, with a clear pathway from donor-supported rollout to sustained public-sector ownership.