

# TAJIKISTAN AGRICULTURE AND WATER ACTIVITY

*Embedding collaborating, learning, and adapting practices into the activity early on fostered improvements in nutrition, sanitation, and farm production in southwestern Tajikistan*

**Introduction.** Food insecurity, disease, and inadequate dietary intake are major public health problems across Khatlon province in southwestern Tajikistan (see box). However, crop diversification and productivity enhancements within small-scale homestead farms offer opportunities to improve livelihoods and increase consumption of nutrient-rich vegetables, fruits, and dairy products.

The Feed the Future Tajikistan Agriculture and Water Activity (TAWA) aims to raise incomes by directly engaging rural women in agricultural productivity, while also boosting awareness of better nutrition and sanitation behaviors.

To reach 50,000 farmers — 70 percent of them women — in 4.5 years, TAWA developed the nutrition-sensitive Farm to Fork capacity building program. The program particularly targeted women farmers of reproductive age or those with children under age 2. Capacity building focuses on agricultural production (the “farm”) in order to make nutrient-dense foods more readily available in households (the “fork”). Nutrition strengthening focuses on better food storage, preservation, preparation, and processing and on improving soil health. Importantly, Farm to Fork embeds the practices of collaboration, learning, and adapting (CLA) into activity decision-making for continuous learning and improvement.

TAWA leadership understood the value of the knowledge, interest, and energy of targeted women beneficiaries to work as partners in the activity. Accordingly, the TAWA leadership team developed an activity learning cycle to apply to each cohort of engaged women.

The cycle included deliberate, rigorous learning feedback loops between the women and the TAWA team, opportunities for sharing lessons learned, and use of technology to further enhance information sharing and behavioral change.

After three years of implementation, initial evidence from a small random sample survey on sustained behavioral change is encouraging. The survey included a small sample of TAWA participants selected from five villages in the first cohort of women in May 2016. These 32 participants were asked whether they had started following specific TAWA-introduced improved practices for hygienic dairy cow handling, vegetable and fruit canning, compost production, vegetable/fruit drying, and household budgeting and whether they were continuing two years later to maintain these practices. Estimated adoption rates included 91 percent for hygienic care of dairy cows, 88 percent for improved canning, 82 percent for improved backyard compost production, and 72 percent for household budgeting and financial management. Adoption rates were lower for vegetable and fruit drying (46 percent), largely due to reluctance to adopt use of sulfur in the process. As the margins of error on this small survey are large (between 9 and 17 percent at 95 percent degree of confidence), these statistics should be

## Snapshot: Khatlon Province

- Poorest province in Tajikistan
- Households headed by women: 17 percent
- Average household size: 7.4 people
- 31 percent of children under 5 stunted, 7 percent suffering from wasting, and 10 percent underweight
- Households possessing agricultural land: 93 percent
- Homestead plot median size: 0.3 hectares



used with caution. However, plans are underway in 2019 for more accurate statistical estimates of sustained adoption rates. Below, we present further details on the establishment, implementation, and impacts of the Farm to Fork program.

## Setting the Stage: Creating a Culture of CLA

In TAWA’s first year, the technical team took steps to build a culture of CLA among staff, partners, and beneficiaries. TAWA leadership started with recruitment of 12 household extension agents (HEAs). The HEA team serves as the key point of outreach for Farm to Fork across the 12 Khatlon districts. Hiring the HEAs included an assessment of candidates’ proclivity to listening, dialogue, and learning. Specifically, candidates were required to come from the Khatlon province and to have a well-established work history of openness to dialogue and learning. Once the HEA team was hired, the TAWA leadership team held one-on-one meetings with each team member to review and discuss roles and responsibilities. The one-on-one meeting served as another opportunity to emphasize the CLA approach that the entire TAWA team would put into practice. It was followed by a week of full-team training and orientation, enabling TAWA leadership to convey the priority given to developing agricultural and financial market opportunities, the feedback and check-in processes for CLA, and the use of new, locally adapted information technologies. This heavy front-end investment in building a culture of openness, continuous learning, and improvement empowered the HEAs, providing them with the knowledge and tools needed to serve their beneficiaries.

Armed with a thorough understanding of the job and the importance of CLA, the HEA team carried out town hall sessions and informal surveys with smallholder women farmers and held meetings with local government representatives. In this way, HEAs gathered ideas and topics on what Farm to Fork should focus on. TAWA leadership, the technical team, and the HEA team understood the importance of creating and formalizing relationships and networks, as well as creating learning feedback loops so target populations would become full partners in learning and adopting new agricultural practices. To that end, the HEA team engaged with target households to develop relationships and build trust that would eventually lead to robust information flow to inform activity decisions.

## TAWA Learning Cycle



## Putting Farm to Fork Capacity Building into Practice

Within the first six months of startup, the TAWA leadership team developed a multistep learning cycle that the HEA team would follow with each new cohort of women farmers (see graphic). Central to TAWA's implementation approach is female HEAs engaging directly with women to introduce the Farm to Fork approach by focusing on topics most important to women: learning improved farming techniques, safe care of dairy cows, and preparation of nutritious foods. The steps of the implementation approach are detailed below:

1. HEAs travel to their respective assigned districts and organize and form women's groups with 20 to 25 women per group.
2. TAWA leadership, the HEA team, technical specialists, village local leaders, and smallholder women farmers jointly identify training topics and learning objectives through informal surveys and town halls.
3. TAWA staff distill feedback from the women's groups and local village leaders to create or refine training modules and materials, with input from the Tajik Agrarian University.
4. After the design stage, TAWA's technical specialists carry out training of trainers for the HEA team using a variety of training tools: flipbooks, multimedia videos, and tablets.
5. HEAs deliver training and work with farmer groups to answer questions and serve as a resource on different topics. After the training period ends, the HEAs carry out a survey and collect findings on recently trained women to collect data for project reporting.
6. Throughout this process, TAWA's HEA team and extension agronomists and specialists discuss new topics of interest and share lessons learned for the next season, leveraging the feedback loops created at the start of forming the women's groups. The after-action reviews happened both formally at TAWA meetings/retreats and informally with staff sharing feedback directly with TAWA leadership.
7. TAWA leadership and the technical team spend time reviewing collected program data and lessons learned.
8. Based on the lessons learned, TAWA leadership and the technical team adjust and orient program activities for the following season and next cohort.

In Year 1, HEAs worked with each women's group for a five-month period. They repeatedly met with the same group of women in their designated district to teach selected topics in the different districts, covering one new topic a month. Certain training topics that involved specialized processes (e.g., apricot drying and care of dairy cows) were taught by TAWA's technical specialist instead of the HEAs.

## Lessons Learned

TAWA leadership had a month in between cohorts to conduct an after-action review to reflect on accomplishments and analyze what happened, why it happened, what worked well, and discuss what could be done better or differently in the future. After completing training for the first two cohorts of women's groups, TAWA leadership captured lessons learned and reviewed activity data collected during the after-action review. Initial data and feedback indicated that the activity was not going to reach its intended impact or targets and that participation rates were dropping after Month 3. To effectively reach 50,000 farmers in Khatlon province, of whom 70 percent were women, TAWA had to change course to engage and work with more women each year.

The learning cycle has now been applied and refined through six cohorts of women, totaling 30,000 women, over 2.5 years. Due to the constant process of gathering data and feedback on training from women farmers and village leaders, TAWA was able to gather a number of lessons learned to refine the Farm to Fork's capacity building approaches. The table on the next page summarizes major lessons learned.

**Tailoring training topics to women.** TAWA staff learned from the women’s group that they found the training materials and delivery format hard to follow and wanted additional training topics covered. Two topics initially taught by male technical leads (apricot drying and care of dairy cows) had lower adoption and participation rates because the women did not feel comfortable learning the material from a male instructor. Based on this feedback, TAWA reoriented training topics to exclusively be taught by the female HEAs.

**Adjusting cohort length and size.** Based on feedback from the women’s groups and to address the dropoff in participation rates after Month 3, TAWA switched to a three-month training schedule. Additionally, TAWA staff learned that the size of the groups was too large (25 women per group) and, in some villages, they were unable to find appropriate space to

accommodate the training. Therefore, the group size was reduced from 25 farmers to 20 farmers to enable more one-on-one time between HEAs and women’s group members and ensure there was adequate space to accommodate the group. TAWA staff anticipated that increasing the total number of cohorts per year and reducing the number of training topics and group size would ensure maximum outreach and participation of women.

**Adjusting training delivery format.** Certain topics resulted in lower adoption rates as the women found the training format to be difficult to learn from and apply. Initial wordy training brochures were boiled down to pocket-sized illustrated flipbooks and instructional DVDs, and training sessions incorporated interactive nutrition cooking demonstrations using food grown by TAWA-supported farmers. TAWA introduced new, nutritious crops like spinach, broccoli, and mung beans. Depending on the topic area, contact information for relevant TAWA staff and for input suppliers was made available within the flipbooks. In this way, the women were able to follow up directly with TAWA staff and input suppliers, in addition to HEAs, to get timely answers on challenges they faced.

**Digitizing data collection and using media for collaborating and learning.** Recognizing increased use of digital phone technology in target households, the team introduced tablets for use by all HEAs in order to:

Lessons Learned and Adjustments from Cohort 1 and 2	
Approach to Cohorts 1 and 2 (2016)	Approach to Cohort 3 and Onwards (2017-2018)
Initial training topics: <ul style="list-style-type: none"> <li>• Care of dairy cows</li> <li>• Backyard apricot drying</li> <li>• Canning of fruit and vegetables</li> <li>• Backyard compost production</li> <li>• Household budgeting and financial management</li> </ul>	Expanded training topics: <ul style="list-style-type: none"> <li>• Care of dairy cows and home-based processing of dairy products</li> <li>• Backyard vegetable production and crop rotation</li> <li>• Integrated pest management for backyard vegetable gardens</li> <li>• Backyard compost production</li> <li>• Household budgeting and financial management</li> <li>• Backyard apricot drying</li> <li>• Preparing meals using activity-supported nutritious crops</li> </ul>
<ul style="list-style-type: none"> <li>• Six months of cohort support and 25 women per HEA group</li> <li>• Cohort 1 and 2 had 19 groups per HEA</li> </ul>	<ul style="list-style-type: none"> <li>• Three months cohort support and 20 women per HEA group</li> <li>• Cohorts 3 and onward had 15 groups per HEA</li> </ul>
Two cohorts per year	Three cohorts per year
Text-heavy brochures and training materials	Illustrated booklets, inclusion of infographics for training materials, and use of interactive methods for training



Nargis Ibragimova, one of TAWA’s 12 HEAs, uses a tablet to share with women in the farmer group examples of good agricultural practices.

Photo credit: Rustam Mailov, TAWA communications specialist

- Introduce pedagogical videos and photos as part of the learning delivery process
- Serve as a conduit for collaborative learning across groups and across cohorts, as videos and photos of one group would be recorded and shared with others
- Enable HEAs to seamlessly collect data and feedback
- Capture information learned in the field to be shared back in the office

As the process has been tested, sharing photos and videos between groups and cohorts has emerged as one of the most effective learning support methods under TAWA.

## Collaborative Approach Results and TAWA's Next Steps

The TAWA team has seen a rise in the number of beneficiaries interested in joining women's groups, which reflects the impact of its Farm to Fork success in generating enthusiasm and spreading the news among more and more female farmers. TAWA expects improved integration of agricultural production with nutrition will result in better food security and resilience outcomes. The team anticipates higher production of nutrient-dense foods due to enhanced production practices, new linkages with market actors and greater adoption of backyard gardening by households for household consumption, and increases to household income. Initial evidence, noted above, shows progress toward sustained adoption of improved practices.

By partnering directly with beneficiaries and creating a culture of CLA among TAWA staff and women's smallholder farmer groups, TAWA is enabling women to adopt practices that benefit their household's income and nutritional uptake. TAWA staff continue to refine Farm to Fork's capacity building by using the activity's learning cycle to adjust TAWA interventions for the greatest impact. A next step is an expanded survey to assess and capture the adoption rate on a wider scale.