



Agriculture Sustainability Activity

Farmers' Association Improves Rice Post-Harvest Management and Storage

Project location	Liberia
Timeframe	2021-2022
Country Project	Rice
Host	Dezebah Farmers' Association



Figure 1. ASA F2F Volunteer Menyee Smith (far right) trains farmers from Dezebah Farmers' Association on post-harvest handling practices.

The United States Agency for International Development (USAID) funded, Catholic Relief Services (CRS) implemented Agriculture Sustainability Activity (ASA) uses the Farmer-to-Farmer (F2F) model to provide technical assistance to agriculture organizations through volunteer trainings to increase the availability of domestically produced and processed rice and cassava. During implementation, the Activity shifted to a Paired Remote Volunteer (PRV) model — a local volunteer paired with a U.S.-based volunteer to allow program implementation during COVID-related travel restrictions.

In the fall of 2021, ASA approached volunteers Menyee Loratta Smith and Gretchen Hopley to support Dezebah Farmers Association in Dezebah Farmers Town, Voinjama District. Mrs. Smith, an agronomist with extensive knowledge in rice and cassava value-chains from Bong County, saw the F2F model as a great approach to technically assist Liberian farmers. Her American counterpart, Ms. Hopley, was an agricultural training specialist from Maryland and possessed strong knowledge of post-harvest management. Together, Mrs. Smith and Ms. Hopley collaborated to create a training to improve Dezebah Farmers' Association's rice post-harvest management, decrease post-harvest loss, and increase incomes.

Founded in 2011 by the USAID-FED project, Dezebah Farmers' Association has an active membership base of 50 local rice producers (17 female and 33 male farmers), each currently operating 1.70 hectares of lowland during the farming season, a total of 85 hectares. It contributes to 18% of the raw material supply to the Selma Agriculture Development Cooperative (SADC) which has the capacity of milling 16MT/day, in Voinjama District, Lofa County.

Dezebah Farmers' Association reached out to ASA for rice post-harvest management and storage assistance; they had limited knowledge of post-harvest systems and previously had not receive any training or awareness sessions on post-harvest technologies and strategies. As such, Dezebah Farmers' Association was experiencing spoiling, bruising, pests and disease attacks, spillage, contamination, and poor storage practices. Overall, this lead to poor rice quality, limited income, and limited prospects for expansion. Before ASA's assistance, the post-harvest rate across all farmers was between 10-40%. Specifically in 2020, the farmers association sold 1,600 bags (32 bags per farmer) and had USD \$17,065.60 in sales. They lost 228.80 bags, 14.30% lost post-harvest.

Mrs. Smith, with remote support from Ms. Hopley, provided the training from October 11-22, 2021, to 37 participants (11 male and 26 female, 25 of whom were youth). The training sessions focused on rice post-harvest and storage practices and took place via field demonstrations; it was engaging and saw a lot of participation. "Farmers have an interest in practical knowledge more than theory. The reason is they feel at home being in the field during a demonstration, rather than sitting ideals during training sessions. They are always on their farms, so taking them there and demonstrating with them brings out their farming ideas." explained Mrs. Smith.

"Through this training, Menyee/CRS team helped to create an incentive for the farmers to not only improve upon but preserve their farms," said Ms. Hopley. "This training not only invested in the skills these farmers already have but really with the help of Menyee demonstrated how viable these farms are economically."

Dezebah Farmers' Association's Chairman Tarnue K. Zayzay appreciated the volunteer support, "Thank God that USAID-CRS/ASA Project was able to add value to us, and our production. By the grace of God and ASA-Project we were able to significantly reduce our post-harvest loss. We also realized that life is better on the farms from the interactions with CRS-ASA Project."

Upon completion of the training, Mrs. Smith and Ms. Hopley recommended the following five recommendations to Dezebah Farmers Association: agree to use the harvesting techniques learned for rice; follow appropriate post-harvest handling methods such as harvesting, packaging, cooling, storage, cleaning, sorting, and transportation; agree to the formation of a farmer-based cooperative, wherein they will draft by-laws and a constitution for governance; work on finding appropriate harvesting tools like tarpaulins, knives, cooling bow, and bags; and, constant monitoring for the above recommendations.

Since Mrs. Smith and Ms. Hopley's support, Dezebah Farmers' Association adopted all volunteer recommendations to minimize post-harvest losses across all farmers from 10-40% to 6-20%. The 6-20% loss occurred doing the 2021 harvesting period; the farmers lacked a farming calendar, harvested late, and the grains over matured in the field. Following the 2021 rice harvest, the 50 original farmers sold 42 bags each, resulting in a total of 2,100 bags. Their sales were USD \$22,400, a 23.81% increase in sales from 2020. The association lost 178.50 bags, a 8.50% post-harvest loss rate. Additionally, membership increased from 50 to 69 members (32 female and 37 male farmers), and each original member purchased two tarpaulins and seven knives.

The ultimate goal for Dezebah Farmers' Association is to become a cooperative and increase rice production. As of now, they have completed 90% of the necessary paperwork to become a legal cooperative and are hoping to become a cooperative by November 2022. By decreasing post-harvest loss and increasing rice production, this F2F assignment is helping Dezebah Farmers' Association get closer to its goal. The knowledge shared by Mrs. Smith and Ms. Hopley will remain with the farmers' association as they continue to grow and expand. "Helping farmers sell their harvest to a wider market generates more social and economic benefits it is exactly what this training underscored - the benefits of investing in human capital," said Ms. Hopley.



Figure 2. Mrs. Smith (standing in the center) with the training participants.