

OUTCOMES OF THE USAID WA-WASH FUNDED MUS OPPORTUNITIES IN BURKINA FASO

EXECUTIVE SUMMARY

The USAID West Africa, Water Supply Sanitation and Hygiene (USAID WA-WASH) Program implements, in Burkina Faso, the water multiple-use services (MUS) through Winrock International. The main objective of the MUS activity is to introduce economically and technically viable activities that make use of the water points provided by the Program. The MUS activities enable poor rural households to achieve sustainable and equitable improvements in access to water, food security, and income. A baseline study conducted in Burkina Faso allowed the identification of four potential areas related to food security, including: (1) conservation farming; (2) market gardening; (3) Moringa production; and (4) local poultry production. The 2014 outcomes in each of the four areas in the nine intervention villages of Vilpalgo, Yaro, Moko, Oullo, Nana, Koukouldi, Tiogo-Mossi, Koudiere, and Weglega are the subject of this report.

Conservation farming (CF) techniques enhance resilience of agricultural production to climate change. They aim to increase agricultural production, improve food security, increase agricultural resilience to cope with the adverse effects of drought, and enhance sustainable agriculture. Nine lead farmers (one from each village) were trained in 2013 on conservation farming and replicated the training in their respective villages. As a result, a total of 272 producers (including 21 women) were trained in 2014. This led to the adoption of conservation farming technique by 295 producers during the 2014 rainy season as a result of the spillover effects of the training. Furthermore, the land area under conservation farming increased from 35.8 hectares in 2013 to 119 hectares in 2014. Additionally, the number of beneficiaries rose from 1,069 in 2013 to 3,050 from in 2014. The conservation farming practices differed from one village to the other. In the Boucle du Mouhoun villages (Moko, Oullo, Nana and Yaro), the majority of the farmers primarily produce maize while their peers from the villages of the Center-West region (Tiogo Mossi and Koukouldi) primarily grow sorghum.

Market gardening activities included: (1) training on improved farming techniques; (2) promoting improved production technologies through demonstrations; (3) introducing rainy season onions and high-yielding varieties of vegetables; and (4) strengthening the link between input dealers and producers for increased access to improved seeds. The Program conducted three training sessions on improved production techniques in 2013 for market gardeners. The first training was a study tour at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) Niger with nine lead farmers for them to learn more about improved seed production. The farmers bought improved seed varieties of tomatoes, pepper, and lettuce for multiplication. The lead farmers trained, in turn, 187 market gardeners (including 21 women) and set-up nine seed production demonstration plots. Through the training, the market gardeners acquired new skills such as preparation of seedbeds using manure and inorganic fertilizers, and sowing in rows for healthy seedling development. The lead farmers also demonstrated the performance of the improved seed varieties to market the seeds to the whole community.

The second training was on rainy season onion production in collaboration with the East West Seeds International (EWSI) and Burkina Primeur companies in Ouagadougou. The training introduced, PREMA178 a new variety of onion, to 238 market gardeners (including nine women). More than half of the trained farmers (120) adopted the practice. As a result of the training, the producers more than doubled their production area from 15,899 square meters in 2013 to 42,235 square meters in 2014. The new varieties and techniques helped the market gardeners increase their income from the rainy season onion production from USD 1,200 in 2013 to USD 3,600 in 2014.

The third component of the market gardening training dealt with the introduction of new production techniques through demonstrations. The new techniques include the use of plastic mulch, low cost irrigation techniques such as drip irrigation,

the installation of the Kickstart pumps, and bicycle pumps. Drip irrigation involves dripping water onto the soil at very low rates (2-20 liters/hour) from a system of small diameter plastic pipes fitted with outlets called drippers. Water is applied close to plants so that only part of the soil in which the roots grow is wetted and resulting in water conservation. The bicycle water pump lifts water at 5-10 gallons per minute from boreholes up to 30 meters in depth. The human-powered pump extracts irrigation and drinking water where electricity is not available. The Kickstart pump is a unique, high-quality, human powered treadle irrigation pump with a high flow rate that allows farmers to irrigate up to two acres of land per day. The pump pulls water from depths of up to 7 meters, pushes it to the field through a pressurized hosepipe and produces a maximum pumping head of 16 meters. These low cost technologies increased water use efficiency and the area under production.

In 2013, the Program supported the Koukouldi women's group to cultivate and process Moringa. To begin with, the group leader was trained at ICRISAT in Niger and was expected to train the rest of the group members. The group members planted 300 improved PMK1 Moringa trees in 2013. The Program sensitized community members on Moringa-based dishes during a MUS workshop and other community activities. In 2014, activities focused on mobilizing other villages to form Moringa production groups, organizing exchange tours with the Koukouldi women's group, and training in Moringa production and processing. As a result of the mobilization activities, five women groups were formed. They cultivated over 1,000 PKM1 Moringa trees. The beneficiaries harvested Moringa leaves for household consumption and for sale at local markets. In addition, the Program organized a training of two members of the Koukouldi women's group on Moringa processing at the Ghana permaculture and supported the group with a Moringa processing machine. The women group processes Moringa into products such as soap, shampoo, and body creams.

To understand local poultry production issues, the program conducted a baseline study in 2013. The major finding of the study was that poultry production in the intervention area was constrained by diseases and inadequate knowledge of improved poultry production. To address these issues, the program developed activities which include: (1) identifying community based vaccinators; (2) training vaccinators; (3) mobilizing poultry producer groups; (4) training the group members on improved poultry production; (5) building demonstration hen houses; and (6) monitoring the vaccinators and the poultry groups. The poultry production group members contribute money for bulk procurement of veterinary drugs, thus reducing the costs of the drugs per individual producer. To encourage the adoption of best practices, the Program, initially, supported the labor costs of vaccination practices.

In conclusion, the MUS activity implementation was a success as shown by the adoption rates of the various technologies, such as conservation farming, Moringa production, and vegetable production using improved seeds. The outcome assessment emphasizes the continued support and monitoring to accelerate adoption rates of the technologies by a wider number of farmers.

This is an executive summary of a report dated September 2014. The full report is available (in French and English) upon request via our website. For more details about our program activities and other reports please visit <http://wawash.fiu.edu/>.

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