



WATER SMART AGRICULTURE IN MALAWI

Overview

Water Smart Agriculture (WaSA) was introduced to Malawi in 2016 as an approach to use water effectively and equitably to reduce climate hazards, such as floods, and enhance farmer resilience. WaSA is not a new concept in terms of techniques. It draws from conservation agriculture, sustainable agriculture and Climate Smart Agriculture. WaSA focuses attention on access to water for production, including increasing the soil's capacity to absorb and store moisture, rainwater harvesting and storage, wastewater re-use, and supplementary small-scale irrigation. In Malawi, WaSA's aim was to improve the capacity of farmers, mostly women, to increase food production and access to markets and to be more food- and water-secure in the context of climate variability by adopting Water Smart Agriculture technologies and practices. Through capacity building efforts, WaSA has reached more than 14,000 smallholder farmers and government agents, of which 12,873 are women across 51 communities.

\$
27% increase in farmer income from crop sales

WaSA practices implemented on at least 2500 hectares



12,000+
women reached



Women farmers at Chitsulo FFBS in Kasungu district learning how to prepare manure

Women in Agriculture

Women represent half of the sub-Saharan African workforce and a significant portion of agricultural labor, yet they often have very limited access to land, water resources and agricultural inputs, and to extension services, agricultural education and outreach.

In Malawi, WaSA includes a specific focus on women farmers to increase their livelihood and food security in the context of water scarcity. By focusing on the needs of women, CARE Malawi helps women access land and resources and to improve soil health, soil moisture retention, and erosion control on their farms. WaSA practices, including zai pits, manure application, box ridging, and plant density, were

adopted by 84% of women farmers who attended WaSA trainings in 2018. Women incorporating WaSA techniques reported a 17.6% increase in net income from agriculture production in 2019, and the use of zai pits resulted in a 70% increase in maize yield compared to traditional practices. The farmers earned more income from the increased yields and were able to provide their families with improved and diversified diets.

Access to Markets and Technology

WaSA improves access to markets and technology in order to economically empower Malawian women and youth. To date, 75 Farmer to Farmer Trainers have established collective financing in the producer groups in order to finance technologies that will assist with their production. For example, farmer collectives purchase groundnut shellers to greatly decrease the time it takes women to remove shells from nuts, increasing their sale value. Groups have also been able to rent-out their shellers for a profit. Producer groups have made it more profitable for women to sell their crops in the market by combining yields, sharing the cost of transport, and sharing advice on where and how to sell. These benefits help to further increase the incomes and community support for women participating in the WaSA program.

Women in the Community

Unique to WaSA are gender dialogue sessions at the community level that challenge attitudes and perceptions of gender roles by enabling men and women, including traditional leaders and landowners, to discuss existing norms and practices. The sessions focus on gendered roles in the household and community, and brainstorming alternative ways men and women can work together to achieve common goals; like increasing yields and improving nutrition of their families. Through these dialogues, the communities collectively agree on actions to improve access to resources for marginalized groups, particularly women. In addition, community leaders allocated fertile lands for demonstration plots for the WaSA-supported collectives to “test” the WaSA techniques and experiment with approaches that work best for their crops. The dialogue sessions have led to men and women communicating more and working together on the same plot of land. CARE is continuing the success of the gender dialogue sessions by integrating topics of menstrual hygiene, starting in September 2019.



Gender dialogue sessions led to more men helping women with household chores

50% men helped in 2016

vs.

88% men helped in 2018

Farmers at the Center of Learning

WaSA places farmers at the center of the learning process by strengthening formal and informal extension systems to better promote integrated soil and water management. CARE Malawi and its partners recognize that strengthening the capacity of existing networks and supplementing those systems with robust community-led extension and information sharing is essential to increase women's access to agricultural services.

Demonstration plots serve as an ideal learning environment where farmers can learn and test new techniques, without risking their livelihoods. CARE Malawi has helped Community Based Extension Agents and producer groups establish a total of 87 demonstration plots to date. CBEAs have also established 75 Farmer Field and Business Schools, where extension agents can reach multiple farmers at once rather than individual households, further scaling up the number of farmers reached by the WaSA program.

Partnerships Beyond Fields

A key part of WaSA's success has been the development of formal and informal community-based extension systems. Over the past two years, CARE Malawi has worked with 166 government officials to support farmers with technical advice on WaSA techniques and to increase the capacity of government extension workers. The extension workers have been trained to work with farmer groups to see water as not just an agricultural resource, but as a community-wide resource that needs to be properly managed and conserved for future food security and well-being. The government extension agents and Community Based Extension Agents trained by CARE allow for ongoing support to farmers. Extension workers have also been essential in promoting trainings for entrepreneurs to start agro-dealerships, connecting farmers to agricultural inputs that are much closer and more accessible than traveling to the closest large town. These partnerships and services further scale the potential impact of the program to additional farmers.



A female agriculture extension development officer training farmers of Kamtchembere FFBS from Kasungu in WaSA practices

Conclusion

Farmers in Malawi who successfully adopted WaSA practices have increased production yields and income, leading to increased food diversification and nutrition for their households. The success in Malawi highlights the potential for WaSA practices to support sustainable food systems and improving climate resiliency for small-scale women farmers, while simultaneously increasing incomes and dietary diversity for their families. By building local government support for the program, water management practices will continue to be improved for future generations.

"Mulching reduces the work burden because I don't have to prepare the ridges. And weeds are reduced so this gives me enough time to concentrate on other things."

-Female smallholder farmer, age

What are the most important outcomes of WaSA? "Improved soil fertility, reduced soil erosion, improved crop yield, improved food and nutrition security at household level."

-Dowa district Land Resources Conservation Officer