Feed the Future Country Fact Sheet

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Feed the Future Lightens Labor for Women in Ethiopia

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An Ethiopian woman uses the “pail lifter", a technology that minimizes the effort required to draw water from a well.

Women in Ethiopia, as in many other developing countries, are the principal water-bearers. Their work is physically taxing and time-consuming, and many walk long distances to reach a water source. They must then fill and lug heavy containers back to their land, but their labors don’t stop there. They must also allot available water for washing, cooking, irrigation and livestock.

This system of fetching and using water fails to take into account the distinctive needs of women. Existing technologies are heavy to operate, expensive to maintain and repair, and place undue burdens on women’s bodies, time and energy.

To lighten this women-borne burden, the Feed the Future Innovation Lab for Small-Scale Irrigation, led by Texas A&M University, is studying a trio of technologies that may conserve women’s time and energy while also conserving land and water use. The first of these technologies, the “pail lifter,” minimizes the effort required to draw water from a well. Its wrapped-rope design also reduces water contamination by preventing contact with the ground and human hands.

The second technology, drip irrigation, conserves water for field use, increases crop yield and produces income for households. Drip irrigation delivers water directly to the root zone of a plant, and using this technology, women in two villages were able to achieve healthy harvests of onions, garlic and tomatoes from previously unproductive fields near their homes. The women sold 66 percent of their yield—a welcome source of income—and had vegetables for home consumption as well.

The third technology, conservation agriculture, protects the soil and boosts crop yields through the use of no-tillage, continuous organic residue mulch and the rotation of different crops. Compared to conventional farming, the conservation agricultural practices improved the women’s average garlic and tomato yields by six and 20 kilograms respectively. The women’s water use was 16 percent lower with the application of these conservation practices.

Eme Desta,* a young, newly married home vegetable grower, reported that she and her husband produced 240 kilograms of

tomato on their small plots of land, 67 percent of which came from conservation agriculture plots. She made about $65 selling her harvest, money that paid for household utilities and a bank deposit. With the remainder of her tomato harvest, Desta was able to prepare more nutritious and diverse meals for her family. The conservation agriculture practices also spared her from the labor-intensive and time-consuming work of drawing water and manual irrigation. Desta now has more time to care for her 6-month old baby.

Desta is one of 20 Ethiopian women participating in the Texas A&M-led Innovation Lab's study of these promising technologies, work which is also being replicated in Tanzania and Ghana. Though the study is just a year old, the outcomes thus far give the Feed the Future Innovation Lab for Small-Scale Irrigation reason to be optimistic that these water-conserving practices will lessen women's labor and increase their vegetable harvest, which will lead to greater home vegetable consumption and increased income.

The Feed the Future Innovation Lab for Small-Scale Irrigation is conducting other research activities to improve women's lives. For example, it is using household survey data to explore how irrigation affects women's decision-making authority and time use as well as the extent to which women's empowerment influences crop choice and production diversity—decisions that have implications for household nutrition. Gender-disaggregated focus group discussions have also delved into men's and women's priorities for water use, perceptions of and preferences for water technologies, and the constraints to their adoption.

The Feed the Future Innovation Lab for Small-Scale Irrigation also partnered with government and research institutions to convene multi-stakeholder **Gender and Irrigation Technical Workshops** in Ethiopia, Tanzania and Ghana. These workshops brought together 50 water and gender experts representing government and civil society, as well as research, private sector and donor communities to tackle knowledge gaps about how irrigation technologies and institutions can better meet women's water needs and improve agricultural productivity.

**Name has been changed to protect privacy.*