

Stories of change

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Engage, enhance and empower: research that makes a difference for African women

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Key messages

- The Canadian International Food Security Research Fund (CIFSRF) specifically targets women smallholder farmers as agents of change.
- Over the last three years, research has directly benefited and engaged over 28,000 farmers: 15,000 female and 13,000 male farmers.
- They have tested over 130 innovations that have increased productivity and incomes and improved and diversified women and children's diets.
- Recognizing the role that women scientists can play in agriculture research, the program has supported the graduate training of 82 young scientists, including 45 women.

Context

Around the world, food insecurity affects an estimated 850 million people. It is widely recognized that women comprise the vast majority of smallholder farmers and food producers in sub-Saharan Africa. There is ample evidence that addressing gender inequalities and empowering women are vital to meeting the challenges of improving food and nutrition security, and enabling poor rural people to overcome poverty.

However, agricultural research has often struggled to effectively secure the participation of women in research activities - as researchers, as agents of change, and as users and clients of the research. Moreover, programs continue to struggle to harness women's potential as key players in getting research results into use and scaling-up innovations. New and creative ways to engage, empower, and benefit both women and men at every stage need to be built into development research initiatives.

A central objective of the Canadian International Food Security Research Fund (CIFSRF) is to address this gender challenge through applied research that develops and promotes practical solutions to increase food security for smallholder farmers in developing countries. CIFSRF places special attention on women farmers and their specific needs in the design of research, the participation of women and the potential impact on them. The goal is to ensure that women are direct recipients of development impacts, including access to markets, income generation, and balanced diets.

In Africa, CIFSRF is supporting ten research projects in nine countries (Benin, Burkina Faso, Ethiopia, Kenya, Mali, Niger, Nigeria, South Africa and Tanzania). Research covers a range of thematic areas including:

- under-utilized and under-researched food crops and livestock;
- soil fertility and water management

technologies for dryland areas;

- nutrition and diets;
- new generation livestock vaccines.

Research teams are addressing gender issues in a number of ways, but in every project, they are involving women in the development of new innovations. Projects also aim to: improve women's access to and control over income; reduce women's drudgery or workload in agriculture; and improve women and children's access to adequate and diversified diets.

CIFSRF's pragmatic strategy integrates gender at six levels:

- gender analysis and equity assessment;
- project implementation;
- gender disaggregation of data;
- research on gender dynamics;
- tracking and documenting gender outcomes;
- capacity building on gender equity.

Tracking gender outcomes

Building on the results of gender analysis, CIFSRF projects are tracking and documenting gender outcomes, and their supporting evidence, in the following areas:

- **Engagement.** What evidence is there that different categories of women are participating in project activities and benefiting from participation?
- **New technologies and practices.** Are women testing and adapting new and improved agricultural technologies and/or farming systems and practices that increase food production?
- **Access to resources.** How is the project contributing to improving women's access to resources for food production and security? E.g. land, inputs, extension and credit, market access.
- **Income generation.** How is the project contributing to improving women's access and control of income, and their ability to purchase more and better quality food?



Women are controlling sales of milk

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- **Dietary diversity and nutrition.** How is the project contributing to dietary diversity/ balanced diets, particularly for women and children?
- **Capacity.** How is the project building the capacity of female scientists and team members?
- **Empowerment.** What innovative and effective actions or strategies is the project using to empower women, increase their access to assets, and ensure gender friendly technology delivery systems?
- **Uptake.** How is the project reaching out/disseminating research results to women and men farmers and other key stakeholders? How is the project influencing behavior, practices, policies, and people, for uptake of innovations by women and men farmers?

Early results are promising. The large volume of high-quality research in CIFSRF holds much scaling-up potential and stands to benefit many more poor people.

Emerging gender outcomes

The *Stories of Change* series shares some of the emerging gender outcomes from CIFSRF projects in sub-Saharan Africa. By 'outcomes', we mean the medium-term developmental results that have been achievable within the time frame of the project. Outcomes usually involve changes in the behavior and practices

of people as a result of an intervention. They are the first signs of impact and encourage researchers to think about how they are able to intentionally contribute to the most profound transformation possible.

This collection of *Stories of Change* aims to document how research is making a difference in changing gender dynamics, engaging women, enhancing their access and control of assets and resources, and empowering them to benefit from applied, adaptive research. We asked, “What difference have the projects made in the lives of poor men and women? Who benefited, and how?”

These *Stories of Change* reveal a number of encouraging gender outcomes from the first phase of the Africa-based CIFSRF projects.

In south western Nigeria, researchers are studying ways to **improve vegetable-growing opportunities for women**. Radio programs have created wide awareness of the nutrition and income benefits of underutilized indigenous vegetables and their best management practices, reaching an estimated 3.5 million people. With new technologies for breaking seed dormancy in these vegetables, opportunities for women to develop seed businesses are being explored, leading to expansion of cultivation and demand for seeds. Farmers have formed and registered 15 indigenous vegetable cooperatives with over 1,200 members (50% women).

In semi-arid Kenya, farmer-led research to scale up agricultural innovations has prompted increased adoption of improved poultry management practices, including vaccination.



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Vaccinating indigenous chickens against Newcastle disease

Healthy chicken husbandry empowers women, feeds families, and builds the resilience of the farming system as a whole. As eggs are laid year-round, farming households now have a stable supply of food and income.

In Tanzania, a systematic approach to goat breeding and root crop production, coupled with intensive training, was used in order for men, women and youth to share responsibilities in management of dairy goats. As a result, **women are now involved in goat breeding**, including heat detection and supervision of the mating process, and record-keeping on production and reproduction parameters. Forty-five female-headed households (out of 111 households in total) now own dairy goats. Women in some male-headed households also own goats, controlling sales of milk and making joint decisions on overall management and sales.

Researchers in Kenya and Canada are developing a vaccine to protect cattle against contagious bovine pleuropneumonia - commonly known as cattle lung disease or CBPP. **The preferences of men and women livestock keepers** in north eastern Kenya will be integrated into the vaccine development process and its delivery. Research will also establish farmers' preferences on timing and frequency of vaccination, willingness to pay, and whom to deliver the vaccine, so that women farmers get maximum benefits.

Results from three years of participatory research in Benin, Burkina Faso and Niger looking at ways to improve fertilizer use indicate that women are 25% more likely to adopt a combination of fertilizer micro-dosing and rainwater harvesting compared to men. By adopting the combined approach, **women are able to triple their profits**.

In Ethiopia, nutrition education about the value of pulses, such as chickpeas, has **helped mothers with infant children to improve their feeding practices**, evidenced by improved weight gain in young children. The use of improved varieties, together with modified food processing and preparation methods, have also reduced cooking time, thereby reducing demand for fuel wood and the time spent - predominantly by women - in collecting it.

Also, in southern Ethiopia, women smallholder farmers are testing practical solutions to increase pulse production. Around 170 women have been involved in community-based seed production of improved chickpea varieties in a project which aims to reach 30,000 farmers in three years. **Women are being supported to establish seed production groups** to enable the scaling up of chickpea, impacting on a large number of farmers in the region.

In Mali, women have investigated the value of tree forage as feed for sheep. Fed on ‘woody forage’ instead of groundnut hay, sheep were found to gain as much weight, while the cost of the forage was much less. Thanks to these savings and the good fattening results, the **women have earned more money from the sale of their sheep** and increased family food security.

In South Africa and Canada, scientists are developing two vaccines that give affordable, long-term protection against some of Africa’s major livestock diseases. The ‘5-in-1’ vaccine protects goats, sheep, and cattle against five important viral diseases with a single injection. A second vaccine will, for the first time, protect pigs against African swine fever. Researchers are also studying the links between vaccine development and economic and social factors, to ensure that small-scale farmers, particularly **women, use the new vaccines**.

Across all projects, the program is building capacity and training a **new generation of highly qualified personnel** in international agricultural research and development. So far 82 African graduate students (45 women) have been supported in CIFSFRF research projects.

Conclusion

CIFSFRF focuses on applied research projects that are able to positively affect agriculture



A chickpea farmer in Ethiopia

and nutrition in developing countries. Project innovations include new skills and tools, improved farming practices, and novel ways to increase sustainable agricultural productivity and the nutritional value of crops and livestock. The research is designed to have a direct impact on smallholders - with an emphasis on women farmers - and consumers, and is expected to contribute to the food security needs of vulnerable populations in an environmentally sustainable way.

This series of stories demonstrates that research is indeed making a difference. CIFSFRF research engages with both men and women, enhances their access to assets, resources and innovations, increases their income, and improves the quality of their diets and investments. While we need more strong evidence on what lasting impacts the projects are creating, these *Stories of Change* point to a number of positive gender outcomes. Lessons learned indicate that by focusing on both women and men farmers, we are seeing faster uptake and a better return on our research-for-development dollars.



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