



REPORTING 2025 EVIDENCE



Multi-crop threshers save time, reduce drudgery, and expand income and employment opportunities for women and youth in Tanzania

OVERVIEW OF THE RESULTS

Between July 2024 and September 2025, the Pan-Africa Bean Research Alliance (PABRA) promoted portable Multi-Crop Threshers (MCTs) across 12 regions in Tanzania to expand mechanization access for smallholder farmers, particularly women and youth, generating 12,972 direct beneficiaries and 18,617 indirect beneficiaries. Through community sensitization, demonstrations, and radio campaigns, the initiative increased adoption of threshing technologies, reduced post-harvest losses and labor burdens, stimulated rural enterprise development, and strengthened inclusive mechanization markets, with spillover effects reaching the Democratic Republic of Congo (DRC) and Rwanda.

GEOGRAPHIC SCOPE: MULTI-COUNTRY



COUNTRIES: Tanzania, with spillover effects occurred in Rwanda and Democratic Republic of Congo.

SDG TARGETS



PRINCIPAL CGIAR IMPACT AREAS



Impact Areas: Nutrition, Health, and Food Security; Poverty Reduction, Livelihoods, and Jobs; Gender Equality, Youth, and Social Inclusion

HIGHLIGHTS

- **Expanded adoption of multi-crop threshers:** acquisition of 150 MCTs at 50% cost, which catalyzed the purchase of additional 88 units by local farmers.
- **Strengthened inclusion of women and youth:** The initiative reached 102 individuals (44 youth and 58 adult women) and 48 women's and youth groups.
- **Machine operators trained:** The initiative trained 260 MCT operators and 150 machine owners.
- **Generated rural jobs and income:** The initiative created over 1,428 jobs and provided threshing services to about 31,589 farmers.
- **Reduced post-harvest losses** by 44% for maize, 33% for sunflower, and 22% for sorghum and improved grain quality
- **Demonstrated profitable mechanization services:** Operators earned average net profits of USD 390 per machine per season.
- **Stimulated regional market expansion:** Demand led to exports of 100 MCTs to DRC and 50 to Rwanda.



Alliance. Sensitization meetings conducted in Tanzania

ELABORATION OF OUTCOME/IMPACT STATEMENT

Mechanization is widely recognized as a catalyst for increasing agricultural productivity and improving rural livelihoods. Yet access to mechanized technologies remains limited among smallholder farmers, especially women and youth who bear the greatest burden of labor-intensive post-harvest activities. In Sub-Saharan Africa, mechanized threshing is largely concentrated in maize and dominated by adult men, while crops such as common beans, finger millet, pigeon pea, sorghum, and sunflower remain largely underserved. To address this gap, the Pan-Africa Bean Research Alliance (PABRA) promoted the Multi-Crop Thresher (MCT)—a portable machine capable of threshing multiple crops efficiently. A key driver of adoption was community sensitization implemented between July 2024 and September 2025 across 12 regions in collaboration with partners. Sensitization meetings introduced project objectives, clarified beneficiary roles, and collected baseline information on mechanization services. They were complemented by local radio campaigns and practical field demonstrations, which increased awareness, built trust, and allowed farmers to directly observe the MCT's functionality and benefits [2,3,4].

This awareness campaign directly translated into adoption and investment decisions. A total of 150 MCT units were acquired through the project in Tanzania by 102 individual beneficiaries (44 male youth and 58 women) and 48 women and youth groups each owning one, while an additional 88 units were independently purchased by entrepreneurs following exposure through sensitization and demonstrations. In total, the initiative engaged 260 MCT operators and 150 machine owners, while baseline assessments also revealed structural gaps, including low women's participation in machine operation (only 3% women operators), informing more targeted inclusion strategies. Spillover effects were observed in the Democratic Republic of Congo (DRC) and Rwanda, with an additional 100 and 50 MCTs exported to each country, respectively. The intervention's real impact is evident in the changes experienced at the farm level. Farmers reported reduced post-harvest losses (44% for maize, 33% for sunflower, and 22% for sorghum), alongside improved grain quality, with 59% of users noting cleaner, less broken, and more marketable produce compared to manual threshing.

Mechanization also significantly reduced post-harvest drudgery, particularly for women and youth, freeing time for other productive and income-generating activities and improving overall household welfare [2,3].

Beyond production benefits, the MCT model catalyzed rural enterprise development. Service providers generated an average net profit of USD 390 per machine per season, achieved a benefit-cost ratio of 2.4, and most recovered their investment within a single production cycle. Each machine created an average of three jobs, contributing to more than 1,428 employment opportunities and enabling approximately 31,589 farmers to access threshing services within one year. At the system level, the intervention also stimulated private-sector growth and market expansion. Imara Technology Limited doubled its 10-day production capacity from 30 to 60 machines by investing in advanced manufacturing technology, including state-of-the-art MIG welding and precision bending machinery, while sustained demand from sensitized communities drove additional independent purchases of MCT units. This demonstrates that the intervention not only distributed technology but also created a self-reinforcing market for mechanization services [3,4].

Overall, the MCT initiative demonstrates that when innovation is combined with effective community sensitization, capacity building, and strong market linkages, it generates measurable and meaningful outcomes. These include improved productivity, reduced losses, increased incomes, job creation, and stronger inclusion of women and youth, ultimately contributing to more resilient, inclusive, and economically vibrant rural communities. In addition, forging partnerships with stakeholders—in this case, development partners and grain traders with a network of farmers—is key in enhancing reach and adoption of new technologies [2,3,4].

EVIDENCE

1. Equitable Agricultural Mechanization: A Gender Perspective of Socio-Economic Benefits of Grain Shelling in Tanzania. Article Under review
2. Smallholder mechanization: Motivation for and barriers to women and youth in Tanzania (2025) [here](#)
3. From hard labor to higher profits: Tanzania's smallholders win big through mechanized threshing power [here](#)
4. Partnerships Drive MCT Mechanization Adoption in Tanzania [here](#)
5. Empowering Women and Youth Farmers in Tanzania Through Threshing Services. Article Under review
6. Scaling Multi-Crop Threshing Machines for Women and Youth Empowerment in Tanzania Article Under review

OTHER NOTABLE REFERENCES, PROMOTIONAL PRODUCTS AND COMMUNICATION MATERIALS

Partnerships Drive MCT Mechanization Adoption in Tanzania [here](#)

Empowering women and youth through Multi-crop Thresher Machines in Tanzania | [here](#)

Multi-Crop Thresher (MTC)| Technology Exchange Lab [here](#)

TAPBDS Partners with CIAT to Scale Post-Harvest Grain Processing Technology Adoption Through Youth & Women Engagement [here](#)

Mechanization in Tanzania video youtube [here](#)

Tanzania's Smallholders Gain from Mechanized Threshing [here](#)

Empowering Women and Youth Farmers in Tanzania Through Threshing Services | [here](#)

CONTRIBUTING EXTERNAL PARTNERS:

- Imara Tech Company Limited
- International Maize and Wheat Improvement Center
- Tanzania Agricultural Research Institute
- Farm Africa
- Agricultural Markets Development Trust
- Centre for Behaviour Change and Communication (CBCC)
- Building Rural Incomes Through Entrepreneurship (BRITEN)
- Rikolto
- Agriculture Council of Tanzania (ACT)
- TAPBDS Company Ltd
- Nafaka Kilimo
- Diocese of Central Tanganyika (DCT)
- Helvetas
- IKUWO General Enterprise
- QSTEK
- Mbamba Traders
- Zowasel Company Ltd
- Madinda Store
- Kibaigwa Flour Supplies (KFS)
- Dodoma Agriculture Seed Producer Association

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